STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 190426

TO: Ralph J Gitomer **Location: rem/3d65/3c18** **Art Unit: 1655** **Monday, June 12, 2006** **Case Serial Number: 10/049374**	**From: Alex Waclawiw** **Location: Biotech-Chem Library** **Rem 1A71** **Phone: 272-2534** **Alexandra.waclawiw@uspto.gov**

Search Notes

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ACCESS DB # 190426

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Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: R GLOMER Examiner # : 69630 Date: 5/18/06

Art Unit: 1655 Phone Number: 2- Serial Number: 10/049,374

Location (Bldg/Room#):_____ (Mailbox #):_____ Results Format Preferred (circle): PAPER DISK

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3C18 / 3D65

MG

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Date: _____

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

****

STAFF USE ONLY

Searcher: Point of Contact: Alexandra Waclawiw

Searcher Phone: Technical Info. Specialist CM1 6A02 Tel: 308-4491

Searcher Location: _____

Date Searcher Picked Up: _____

Date Completed: _____

Searcher Prep & Review Time: 12

Online Time: 58

Type of Search

_____ NA Sequence (#)

_____ AA Sequence (#)

_____ Structure (#)

_____ Bibliographic

_____ Litigation

_____ Fulltext

_____ Other

Vendors and cost where applicable

_____ STN _____ Dialog

_____ Questel/Orbit _____ Lexis/Nexis

_____ Westlaw _____ WWW/Internet

____ In-house sequence systems

____ Commercial ____ Oligomer ____ Score/Length

____ Interference ____ SPDI ____ Encode/Transl

_____ Other (specify)

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     FILE 'CAPLUS' ENTERED AT 10:20:24 ON 12 JUN 2006
L1           20 SEA ABB=ON  PLU=ON  PLATELET/OBI (L) CONTRACTILE/OBI (L)
                FORCE#/OBI
L2            5 SEA ABB=ON  PLU=ON  BLOOD/OBI (L) CLOT/OBI (L) ELASTIC/OBI
L3           46 SEA ABB=ON  PLU=ON  (PLATELET (S) CONTRACTILE(S) FORCE#)/BI
L4           12 SEA ABB=ON  PLU=ON  (BLOOD (S) CLOT (S) ELASTIC)/BI
L5           51 SEA ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4)
L6        97810 SEA ABB=ON  PLU=ON  HEART/OBI (L) (DISEASE#/OBI OR ANGINA/OBI
                OR INFARCT?/OBI)
L7        60714 SEA ABB=ON  PLU=ON  ARTERY/OBI (L) (DISEASE#/OBI ) OR ATHEROSCL
                EROSIS?/OBI
L8           10 SEA ABB=ON  PLU=ON  L5 AND ((L6 OR L7))
L9          920 SEA ABB=ON  PLU=ON  (THROMBIN/OBI  OR PLATELET/OBI) (L)
                MARKER#/OBI
L10           4 SEA ABB=ON  PLU=ON  L9 AND L5
L11          10 SEA ABB=ON  PLU=ON  L8 OR L10
L12         175 SEA ABB=ON  PLU=ON  L9 AND ((L6 OR L7))
L13        4116 SEA ABB=ON  PLU=ON  (CONTRACTILE (S) FORCE)/BI
L14           4 SEA ABB=ON  PLU=ON  L13 AND L12
L15          10 SEA ABB=ON  PLU=ON  L14 OR L11
L16          44 SEA ABB=ON  PLU=ON  THROMBUS/OBI (L) MARKER#/OBI
L17           1 SEA ABB=ON  PLU=ON  L16 AND L5
L18          10 SEA ABB=ON  PLU=ON  L17 OR L15
L19          26 SEA ABB=ON  PLU=ON  L16 AND ((L6 OR L7))
L20           7 SEA ABB=ON  PLU=ON  L19 AND PLATELET#/OBI
L21          16 SEA ABB=ON  PLU=ON  L20 OR L15
L22         594 SEA ABB=ON  PLU=ON  CARR M?/AU
L23           1 SEA ABB=ON  PLU=ON  KRISCHNASWAMI A?/AU
L24        2440 SEA ABB=ON  PLU=ON  MARTIN E?/AU
L25        3017 SEA ABB=ON  PLU=ON  (L22 OR L23 OR L24)
L26       86922 SEA ABB=ON  PLU=ON  PLATELET#/OBI
L27          47 SEA ABB=ON  PLU=ON  L26 AND L25
L28           7 SEA ABB=ON  PLU=ON  L27 AND ((L6 OR L7))
L29           4 SEA ABB=ON  PLU=ON  L28 NOT L21

     FILE 'BIOSIS' ENTERED AT 10:27:28 ON 12 JUN 2006
L30          51 SEA ABB=ON  PLU=ON  PLATELET# (3A) CONTRACTILE (3A) FORCE#
L31          44 SEA ABB=ON  PLU=ON  CLOT (3A) ELASTIC
L32          74 SEA ABB=ON  PLU=ON  (L30 OR L31)
L33      282558 SEA ABB=ON  PLU=ON  HEART (L) (DISEASE# OR INFARCT?)
L34       58296 SEA ABB=ON  PLU=ON  ATHEROSCLEROSIS OR CORNARY (4A) DISEASE#
L35           9 SEA ABB=ON  PLU=ON  L32 AND ((L33 OR L34))
L36          12 SEA ABB=ON  PLU=ON  L32 AND (HEART OR ANGINA OR INFARCT?)
L37          12 SEA ABB=ON  PLU=ON  L36 OR L35
L38         498 SEA ABB=ON  PLU=ON  ("CARR M"/AU OR "CARR M A"/AU OR "CARR M
                AUSTIN"/AU OR "CARR M B"/AU OR "CARR M C"/AU OR "CARR M D"/AU
                OR "CARR M E"/AU OR "CARR M E JR"/AU OR "CARR M F"/AU OR "CARR
                M F JR"/AU OR "CARR M G"/AU OR "CARR M H"/AU OR "CARR M
                HERZOG"/AU OR "CARR M I"/AU OR "CARR M J"/AU OR "CARR M J
                T"/AU OR "CARR M JR"/AU OR "CARR M K V"/AU OR "CARR M L"/AU OR
                "CARR M M"/AU OR "CARR M P"/AU OR "CARR M R"/AU OR "CARR M
                T"/AU OR "CARR M W"/AU OR "CARR M Y"/AU) OR ("CARR MARCUS"/AU
                OR "CARR MARCUS E"/AU OR "CARR MARCUS E JR"/AU)
L39         760 SEA ABB=ON  PLU=ON  MARTIN E/AU
L40         724 SEA ABB=ON  PLU=ON  MARTIN E ?/AU
L41           2 SEA ABB=ON  PLU=ON  MARTIN ERIKA/AU
L42        1980 SEA ABB=ON  PLU=ON  (L38 OR L39 OR L40 OR L41)
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L43          34 SEA ABB=ON  PLU=ON  L42 AND L32
L44           5 SEA ABB=ON  PLU=ON  L43 AND (L33 OR L34 OR ANGINA OR INFARCT?)

L45          50 SEA ABB=ON  PLU=ON  MARKER# AND L42
L46           6 SEA ABB=ON  PLU=ON  L45 AND PLATELET
L47          10 SEA ABB=ON  PLU=ON  L46 OR L44
L48           5 SEA ABB=ON  PLU=ON  L47 NOT L37

     FILE 'MEDLINE' ENTERED AT 10:36:56 ON 12 JUN 2006
L49          45 SEA ABB=ON  PLU=ON  PLATELET (S) CONTRACTILE(S) FORCE#
L50           7 SEA ABB=ON  PLU=ON  BLOOD (S) CLOT (S) ELASTIC
L51           3 SEA ABB=ON  PLU=ON  BLOOD (5A) CLOT(5A) ELASTIC
L52           8 SEA ABB=ON  PLU=ON  L49 AND HEART
L53      204937 SEA ABB=ON  PLU=ON  ANGINA OR INFARCT?
L54           1 SEA ABB=ON  PLU=ON  L49 AND L53
L55       46980 SEA ABB=ON  PLU=ON  ATHEROSCLEROSIS
L56           0 SEA ABB=ON  PLU=ON  L55 AND (L49 OR L51)
L57           0 SEA ABB=ON  PLU=ON  L51 AND (L53)
L58           8 SEA ABB=ON  PLU=ON  L54 OR L52
L59           2 SEA ABB=ON  PLU=ON  MARKER# (S) L49
L60           7 SEA ABB=ON  PLU=ON  MARKER# (L) L49
L61          22 SEA ABB=ON  PLU=ON  CLOT (3A) ELASTIC (3A) MODULUS
L62           0 SEA ABB=ON  PLU=ON  L61 AND (L53 OR L55)
L63      152066 SEA ABB=ON  PLU=ON  PLATELET#
L64          16 SEA ABB=ON  PLU=ON  L63 AND L61
L65      319251 SEA ABB=ON  PLU=ON  MARKER#
L66           3 SEA ABB=ON  PLU=ON  L64 AND L65
L67          14 SEA ABB=ON  PLU=ON  L66 OR L60 OR  L52 OR L54
                E CARR M/AU
L68         182 SEA ABB=ON  PLU=ON  "CARR M"/AU OR ("CARR M E"/AU OR "CARR M E
                J"/AU OR "CARR M E JR"/AU) OR ("CARR MARCUS"/AU OR "CARR
                MARCUS E"/AU OR "CARR MARCUS E JR"/AU)
                E KRISCHNASWAMI A/AU
                E MARTIN E/AU
L69         1976 SEA ABB=ON  PLU=ON  ("MARTIN E"/AU OR "MARTIN E 3RD"/AU OR
                "MARTIN E A"/AU OR "MARTIN E B"/AU OR "MARTIN E C"/AU OR
                "MARTIN E D"/AU OR "MARTIN E D JR"/AU OR "MARTIN E E"/AU OR
                "MARTIN E G"/AU OR "MARTIN E J"/AU OR "MARTIN E J 3RD"/AU OR
                "MARTIN E JANE"/AU OR "MARTIN E JR"/AU OR "MARTIN E L"/AU OR
                "MARTIN E M"/AU OR "MARTIN E N"/AU OR "MARTIN E O"/AU OR
                "MARTIN E P"/AU OR "MARTIN E R"/AU OR "MARTIN E S"/AU OR
                "MARTIN E S 3RD"/AU OR "MARTIN E T"/AU OR "MARTIN E T JR"/AU
                OR "MARTIN E V"/AU OR "MARTIN E W"/AU OR "MARTIN E W JR"/AU)
                E MARTIN ERIKA/AU
L70          11 SEA ABB=ON  PLU=ON  ("MARTIN ERIKA"/AU OR "MARTIN ERIKA G"/AU
                OR "MARTIN ERIKA J"/AU)
L71        2151 SEA ABB=ON  PLU=ON  (L68 OR L69 OR L70)
L72          22 SEA ABB=ON  PLU=ON  L71 AND (L49 OR L51 OR L61)
L73          16 SEA ABB=ON  PLU=ON  L72 NOT L67
L74           0 SEA ABB=ON  PLU=ON  L72 AND (HEART OR ANGINA OR INFARCT?)
L75          16 SEA ABB=ON  PLU=ON  L73 AND PLATELET?

     FILE 'CAPLUS, BIOSIS, MEDLINE' ENTERED AT 10:44:39 ON 12 JUN 2006
L76          32 DUP REM L21 L37 L67 (10 DUPLICATES REMOVED)
                    ANSWERS '1-16' FROM FILE CAPLUS
                    ANSWERS '17-24' FROM FILE BIOSIS
                    ANSWERS '25-32' FROM FILE MEDLINE
L77          25 DUP REM L29 L48 L75 (0 DUPLICATES REMOVED)
                    ANSWERS '1-4' FROM FILE CAPLUS
                    ANSWERS '5-9' FROM FILE BIOSIS
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ANSWERS '10-25' FROM FILE MEDLINE

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=> fil caplus biosis medline
FILE 'CAPLUS' ENTERED AT 10:45:10 ON 12 JUN 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE 'BIOSIS' ENTERED AT 10:45:10 ON 12 JUN 2006
Copyright (c) 2006 The Thomson Corporation

FILE 'MEDLINE' ENTERED AT 10:45:10 ON 12 JUN 2006

=> d que l76;d que l77
L1            20 SEA FILE=CAPLUS ABB=ON  PLU=ON  PLATELET/OBI (L) CONTRACTILE/OB
                 I (L) FORCE#/OBI
L2             5 SEA FILE=CAPLUS ABB=ON  PLU=ON  BLOOD/OBI (L) CLOT/OBI (L)
                 ELASTIC/OBI
L3            46 SEA FILE=CAPLUS ABB=ON  PLU=ON  (PLATELET (S) CONTRACTILE(S)
                 FORCE#)/BI
L4            12 SEA FILE=CAPLUS ABB=ON  PLU=ON  (BLOOD (S) CLOT (S) ELASTIC)/BI

L5            51 SEA FILE=CAPLUS ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4)
L6         97810 SEA FILE=CAPLUS ABB=ON  PLU=ON  HEART/OBI (L) (DISEASE#/OBI OR
                 ANGINA/OBI OR INFARCT?/OBI)
L7         60714 SEA FILE=CAPLUS ABB=ON  PLU=ON  ARTERY/OBI (L) (DISEASE#/OBI )
                 OR ATHEROSCLEROSIS?/OBI
L8            10 SEA FILE=CAPLUS ABB=ON  PLU=ON  L5 AND ((L6 OR L7))
L9           920 SEA FILE=CAPLUS ABB=ON  PLU=ON  (THROMBIN/OBI  OR PLATELET/OBI)
                  (L) MARKER#/OBI
L10            4 SEA FILE=CAPLUS ABB=ON  PLU=ON  L9 AND L5
L11           10 SEA FILE=CAPLUS ABB=ON  PLU=ON  L8 OR L10
L12          175 SEA FILE=CAPLUS ABB=ON  PLU=ON  L9 AND ((L6 OR L7))
L13         4116 SEA FILE=CAPLUS ABB=ON  PLU=ON  (CONTRACTILE (S) FORCE)/BI
L14            4 SEA FILE=CAPLUS ABB=ON  PLU=ON  L13 AND L12
L15           10 SEA FILE=CAPLUS ABB=ON  PLU=ON  L14 OR L11
L16           44 SEA FILE=CAPLUS ABB=ON  PLU=ON  THROMBUS/OBI (L) MARKER#/OBI
L19           26 SEA FILE=CAPLUS ABB=ON  PLU=ON  L16 AND ((L6 OR L7))
L20            7 SEA FILE=CAPLUS ABB=ON  PLU=ON  L19 AND PLATELET#/OBI
L21           16 SEA FILE=CAPLUS ABB=ON  PLU=ON  L20 OR L15
L30           51 SEA FILE=BIOSIS ABB=ON  PLU=ON  PLATELET# (3A) CONTRACTILE
                 (3A) FORCE#
L31           44 SEA FILE=BIOSIS ABB=ON  PLU=ON  CLOT (3A) ELASTIC
L32           74 SEA FILE=BIOSIS ABB=ON  PLU=ON  (L30 OR L31)
L33       282558 SEA FILE=BIOSIS ABB=ON  PLU=ON  HEART (L) (DISEASE# OR
                 INFARCT?)
L34        58296 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATHEROSCLEROSIS OR CORNARY
                 (4A) DISEASE#
L35            9 SEA FILE=BIOSIS ABB=ON  PLU=ON  L32 AND ((L33 OR L34))
L36           12 SEA FILE=BIOSIS ABB=ON  PLU=ON  L32 AND (HEART OR ANGINA OR
                 INFARCT?)
L37           12 SEA FILE=BIOSIS ABB=ON  PLU=ON  L36 OR L35
L49           45 SEA FILE=MEDLINE ABB=ON  PLU=ON  PLATELET (S) CONTRACTILE(S)
                 FORCE#
L52            8 SEA FILE=MEDLINE ABB=ON  PLU=ON  L49 AND HEART
L53       204937 SEA FILE=MEDLINE ABB=ON  PLU=ON  ANGINA OR INFARCT?
L54            1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L49 AND L53
L60            7 SEA FILE=MEDLINE ABB=ON  PLU=ON  MARKER# (L) L49
L61           22 SEA FILE=MEDLINE ABB=ON  PLU=ON  CLOT (3A) ELASTIC (3A)
                 MODULUS
L63       152066 SEA FILE=MEDLINE ABB=ON  PLU=ON  PLATELET#
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L64          16 SEA FILE=MEDLINE ABB=ON  PLU=ON  L63 AND L61
L65      319251 SEA FILE=MEDLINE ABB=ON  PLU=ON  MARKER#
L66           3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L64 AND L65
L67          14 SEA FILE=MEDLINE ABB=ON  PLU=ON  L66 OR L60 OR  L52 OR L54
L76          32 DUP REM L21 L37 L67 (10 DUPLICATES REMOVED)



L1           20 SEA FILE=CAPLUS ABB=ON  PLU=ON  PLATELET/OBI (L) CONTRACTILE/OB
                I (L) FORCE#/OBI
L2            5 SEA FILE=CAPLUS ABB=ON  PLU=ON  BLOOD/OBI (L) CLOT/OBI (L)
                ELASTIC/OBI
L3           46 SEA FILE=CAPLUS ABB=ON  PLU=ON  (PLATELET (S) CONTRACTILE(S)
                FORCE#)/BI
L4           12 SEA FILE=CAPLUS ABB=ON  PLU=ON  (BLOOD (S) CLOT (S) ELASTIC)/BI

L5           51 SEA FILE=CAPLUS ABB=ON  PLU=ON  (L1 OR L2 OR L3 OR L4)
L6        97810 SEA FILE=CAPLUS ABB=ON  PLU=ON  HEART/OBI (L) (DISEASE#/OBI OR
                ANGINA/OBI OR INFARCT?/OBI)
L7        60714 SEA FILE=CAPLUS ABB=ON  PLU=ON  ARTERY/OBI (L) (DISEASE#/OBI )
                OR ATHEROSCLEROSIS?/OBI
L8           10 SEA FILE=CAPLUS ABB=ON  PLU=ON  L5 AND ((L6 OR L7))
L9          920 SEA FILE=CAPLUS ABB=ON  PLU=ON  (THROMBIN/OBI  OR PLATELET/OBI)
                 (L) MARKER#/OBI
L10           4 SEA FILE=CAPLUS ABB=ON  PLU=ON  L9 AND L5
L11          10 SEA FILE=CAPLUS ABB=ON  PLU=ON  L8 OR L10
L12         175 SEA FILE=CAPLUS ABB=ON  PLU=ON  L9 AND ((L6 OR L7))
L13        4116 SEA FILE=CAPLUS ABB=ON  PLU=ON  (CONTRACTILE (S) FORCE)/BI
L14           4 SEA FILE=CAPLUS ABB=ON  PLU=ON  L13 AND L12
L15          10 SEA FILE=CAPLUS ABB=ON  PLU=ON  L14 OR L11
L16          44 SEA FILE=CAPLUS ABB=ON  PLU=ON  THROMBUS/OBI (L) MARKER#/OBI
L19          26 SEA FILE=CAPLUS ABB=ON  PLU=ON  L16 AND ((L6 OR L7))
L20           7 SEA FILE=CAPLUS ABB=ON  PLU=ON  L19 AND PLATELET#/OBI
L21          16 SEA FILE=CAPLUS ABB=ON  PLU=ON  L20 OR L15
L22         594 SEA FILE=CAPLUS ABB=ON  PLU=ON  CARR M?/AU
L23           1 SEA FILE=CAPLUS ABB=ON  PLU=ON  KRISCHNASWAMI A?/AU
L24        2440 SEA FILE=CAPLUS ABB=ON  PLU=ON  MARTIN E?/AU
L25        3017 SEA FILE=CAPLUS ABB=ON  PLU=ON  (L22 OR L23 OR L24)
L26       86922 SEA FILE=CAPLUS ABB=ON  PLU=ON  PLATELET#/OBI
L27          47 SEA FILE=CAPLUS ABB=ON  PLU=ON  L26 AND L25
L28           7 SEA FILE=CAPLUS ABB=ON  PLU=ON  L27 AND ((L6 OR L7))
L29           4 SEA FILE=CAPLUS ABB=ON  PLU=ON  L28 NOT L21
L30          51 SEA FILE=BIOSIS ABB=ON  PLU=ON  PLATELET# (3A) CONTRACTILE
                (3A) FORCE#
L31          44 SEA FILE=BIOSIS ABB=ON  PLU=ON  CLOT (3A) ELASTIC
L32          74 SEA FILE=BIOSIS ABB=ON  PLU=ON  (L30 OR L31)
L33      282558 SEA FILE=BIOSIS ABB=ON  PLU=ON  HEART (L) (DISEASE# OR
                INFARCT?)
L34       58296 SEA FILE=BIOSIS ABB=ON  PLU=ON  ATHEROSCLEROSIS OR CORNARY
                (4A) DISEASE#
L35           9 SEA FILE=BIOSIS ABB=ON  PLU=ON  L32 AND ((L33 OR L34))
L36          12 SEA FILE=BIOSIS ABB=ON  PLU=ON  L32 AND (HEART OR ANGINA OR
                INFARCT?)
L37          12 SEA FILE=BIOSIS ABB=ON  PLU=ON  L36 OR L35
L38         498 SEA FILE=BIOSIS ABB=ON  PLU=ON  ("CARR M"/AU OR "CARR M A"/AU
                OR "CARR M AUSTIN"/AU OR "CARR M B"/AU OR "CARR M C"/AU OR
                "CARR M D"/AU OR "CARR M E"/AU OR "CARR M E JR"/AU OR "CARR M
                F"/AU OR "CARR M F JR"/AU OR "CARR M G"/AU OR "CARR M H"/AU OR
                "CARR M HERZOG"/AU OR "CARR M I"/AU OR "CARR M J"/AU OR "CARR
                M J T"/AU OR "CARR M JR"/AU OR "CARR M K V"/AU OR "CARR M
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                L"/AU OR "CARR M M"/AU OR "CARR M P"/AU OR "CARR M R"/AU OR
                "CARR M T"/AU OR "CARR M W"/AU OR "CARR M Y"/AU) OR ("CARR
                MARCUS"/AU OR "CARR MARCUS E"/AU OR "CARR MARCUS E JR"/AU)
L39           760 SEA FILE=BIOSIS ABB=ON  PLU=ON  MARTIN E/AU
L40           724 SEA FILE=BIOSIS ABB=ON  PLU=ON  MARTIN E ?/AU
L41             2 SEA FILE=BIOSIS ABB=ON  PLU=ON  MARTIN ERIKA/AU
L42          1980 SEA FILE=BIOSIS ABB=ON  PLU=ON  (L38 OR L39 OR L40 OR L41)
L43            34 SEA FILE=BIOSIS ABB=ON  PLU=ON  L42 AND L32
L44             5 SEA FILE=BIOSIS ABB=ON  PLU=ON  L43 AND (L33 OR L34 OR ANGINA
                OR INFARCT?)
L45            50 SEA FILE=BIOSIS ABB=ON  PLU=ON  MARKER# AND L42
L46             6 SEA FILE=BIOSIS ABB=ON  PLU=ON  L45 AND PLATELET
L47            10 SEA FILE=BIOSIS ABB=ON  PLU=ON  L46 OR L44
L48             5 SEA FILE=BIOSIS ABB=ON  PLU=ON  L47 NOT L37
L49            45 SEA FILE=MEDLINE ABB=ON  PLU=ON  PLATELET (S) CONTRACTILE(S)
                FORCE#
L51             3 SEA FILE=MEDLINE ABB=ON  PLU=ON  BLOOD (5A) CLOT(5A) ELASTIC
L52             8 SEA FILE=MEDLINE ABB=ON  PLU=ON  L49 AND HEART
L53        204937 SEA FILE=MEDLINE ABB=ON  PLU=ON  ANGINA OR INFARCT?
L54             1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L49 AND L53
L60             7 SEA FILE=MEDLINE ABB=ON  PLU=ON  MARKER# (L) L49
L61            22 SEA FILE=MEDLINE ABB=ON  PLU=ON  CLOT (3A) ELASTIC (3A)
                MODULUS
L63        152066 SEA FILE=MEDLINE ABB=ON  PLU=ON  PLATELET#
L64            16 SEA FILE=MEDLINE ABB=ON  PLU=ON  L63 AND L61
L65        319251 SEA FILE=MEDLINE ABB=ON  PLU=ON  MARKER#
L66             3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L64 AND L65
L67            14 SEA FILE=MEDLINE ABB=ON  PLU=ON  L66 OR L60 OR  L52 OR L54
L68           182 SEA FILE=MEDLINE ABB=ON  PLU=ON  "CARR M"/AU OR ("CARR M E"/AU
                OR "CARR M E J"/AU OR "CARR M E JR"/AU) OR ("CARR MARCUS"/AU
                OR "CARR MARCUS E"/AU OR "CARR MARCUS E JR"/AU)
L69          1976 SEA FILE=MEDLINE ABB=ON  PLU=ON  ("MARTIN E"/AU OR "MARTIN E
                3RD"/AU OR "MARTIN E A"/AU OR "MARTIN E B"/AU OR "MARTIN E
                C"/AU OR "MARTIN E D"/AU OR "MARTIN E D JR"/AU OR "MARTIN E
                E"/AU OR "MARTIN E G"/AU OR "MARTIN E J"/AU OR "MARTIN E J
                3RD"/AU OR "MARTIN E JANE"/AU OR "MARTIN E JR"/AU OR "MARTIN E
                L"/AU OR "MARTIN E M"/AU OR "MARTIN E N"/AU OR "MARTIN E O"/AU
                OR "MARTIN E P"/AU OR "MARTIN E R"/AU OR "MARTIN E S"/AU OR
                "MARTIN E S 3RD"/AU OR "MARTIN E T"/AU OR "MARTIN E T JR"/AU
                OR "MARTIN E V"/AU OR "MARTIN E W"/AU OR "MARTIN E W JR"/AU)
L70            11 SEA FILE=MEDLINE ABB=ON  PLU=ON  ("MARTIN ERIKA"/AU OR "MARTIN
                ERIKA G"/AU OR "MARTIN ERIKA J"/AU)
L71          2151 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L68 OR L69 OR L70)
L72            22 SEA FILE=MEDLINE ABB=ON  PLU=ON  L71 AND (L49 OR L51 OR L61)
L73            16 SEA FILE=MEDLINE ABB=ON  PLU=ON  L72 NOT L67
L75            16 SEA FILE=MEDLINE ABB=ON  PLU=ON  L73 AND PLATELET?
L77            25 DUP REM L29 L48 L75 (0 DUPLICATES REMOVED)


=> d .ca l76 1-16;d ibib ab ct l76 17-32;d ibib ab l77 1-25

L76  ANSWER 1 OF 32  CAPLUS  COPYRIGHT 2006 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2004:415751  CAPLUS
DOCUMENT NUMBER:          141:362670
TITLE:                    Onset of force development as a marker of
                          thrombin generation in whole blood: The
                          thrombin generation time (TGT)
AUTHOR(S):                Carr, M. E., Jr.; Martin, E. J.; Kuhn, J. G.; Spiess,
                          B. D.
CORPORATE SOURCE:         Coagulation Special Studies Laboratory, Departments of
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Medicine, Pathology, Central Virginia Center for Coagulation Disorders, Medical College of Virginia, Richmond Veterans Administration Medical Center, Virginia Commonwealth University, Richmond, VA, USA

SOURCE: Journal of Thrombosis and Haemostasis (2003), 1(9), 1977-1983
CODEN: JTHOA5; ISSN: 1538-7933
PUBLISHER: Blackwell Publishing Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 24 May 2004

AB Prothrombin activation requires the direct interplay of activated platelets and plasma clotting factors. Once formed, thrombin causes profound, irreversible activation of platelets and reinforces the platelet plug via fibrin formation. Delayed or deficient thrombin production increases bleeding risk. Commonly employed coagulation assays, the prothrombin and partial thromboplastin times, use clot formation as a surrogate marker of thrombin generation. These assays routinely utilize platelet-poor plasma and completely miss the effects of platelets. Other markers of thrombin generation, prothrombin fragment 1+2 (F1+2) and thrombin-antithrombin complex, are typically measured after the fact. We report a simple assay, which employs the onset of **platelet contractile force** (PCF) as a surrogate marker of thrombin generation. PCF generation occurs concomitant with the burst of F1+2 release. The time between assay start and PCF onset is termed the thrombin generation time (TGT). TGT is prolonged in clotting factor deficiencies and in the presence of direct and indirect thrombin inhibitors. TGT shortens to normal with clotting factor replacement and shortens with administration of recombinant factor VIIa. TGT is short in thrombophilic states such as coronary artery disease, diabetes and thromboangiitis obliterans and prolongs toward normal with oral and i.v. anticoagulants.

CC 9-16 (Biochemical Methods)
ST onset force development **marker thrombin** generation blood time TGT
IT **Artery, disease**
(coronary; onset of force development as **marker** of **thrombin** generation in whole blood)
IT Blood analysis
Blood coagulation
Diabetes mellitus
(onset of force development as **marker** of **thrombin** generation in whole blood)
IT Fibrins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(onset of force development as **marker** of **thrombin** generation in whole blood)
IT Thrombosis
(thromboangiitis obliterans; onset of force development as **marker** of **thrombin** generation in whole blood)
IT 9002-04-4, **Thrombin** 65312-43-8, Blood-coagulation factor VIIa
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(onset of force development as **marker** of **thrombin** generation in whole blood)
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 2 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2002:933118 CAPLUS
TITLE: Patients with coronary **artery disease** who present with chest pain have

significantly elevated **platelet contractile force** and clot elastic modulus

AUTHOR(S): Krishnaswami, Ashok; Carr, Marcus E., Jr.; Jesse, Robert L.; Kontos, Michael C.; Minisi, Anthony J.; Ornato, Joseph P.; Vetrovec, George W.; Martin, Erika J.

CORPORATE SOURCE: Department of Internal Medicine, Richmond Veterans Medical Center, Medical College of Virginia Hospitals of Virginia Commonwealth University, Richmond, VA, 23298-0230, USA

SOURCE: Thrombosis and Haemostasis (2002), 88(5), 739-744
CODEN: THHADQ; ISSN: 0340-6245

PUBLISHER: Schattauer GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 10 Dec 2002

AB Rapid laboratory markers that correlate with patient risk would facilitate the decision making regarding admission of patients with chest pain (CP). **Platelet contractile force** (PCF) and clot elastic modulus (CEM) are elevated in patients undergoing coronary bypass grafting. This study assessed PCF, CEM, and platelet aggregation in patients presenting to the emergency department with chest pain (CP). Results were compared with fifty normal controls. Both the total group of CP patients (n = 100) and the subset of patients (n = 36) with documented coronary arterys disease (CAD) had significantly elevated PCF and CEM, and significantly decreased platelet aggregation relative to normal ($p < 0.001$ for the total group, $p \leq 0.008$ for patients with CAD). Patients with electrocardiog. evidence of ischemia had the highest PCF and CEM values of any patient group. Increased PCF and CEM were not due to higher platelet counts, and PCF did not differ by race.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 3 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 2002:528655 CAPLUS

DOCUMENT NUMBER: 137:335988

TITLE: Failure of platelet parameters and biomarkers to correlate platelet function to severity and etiology of heart failure in patients enrolled in the EPCOT trial

AUTHOR(S): Serebruany, Victor L.; McKenzie, Marcus E.; Meister, Andrew F.; Fuzaylov, Sergey Y.; Gurbel, Paul A.; Atar, Dan; Gattis, Wendy A.; O'Connor, Christopher M.

CORPORATE SOURCE: Johns Hopkins University, Sinai Hospital, Baltimore, MD, USA

SOURCE: Pathophysiology of Haemostasis and Thrombosis (2002), 32(1), 8-15
CODEN: PHTAC7; ISSN: 1424-8832

PUBLISHER: S. Karger AG

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 16 Jul 2002

AB Data from small studies have suggested the presence of platelet abnormalities in patients with congestive heart failure (CHF). We sought to characterize the diagnostic utility of different platelet parameters and platelet-endothelial biomarkers in a random outpatient CHF population investigated in the EPCOT ('Whole Blood Impedance Aggregometry for the Assessment of Platelet Function in Patients with Congestive Heart Failure') Trial. Blood samples were obtained for measurement of

platelet contractile force (PCF), whole blood aggregation, shear-induced closure time, expression of glycoprotein (GP) IIb/IIIa, and P-selectin in 100 consecutive patients with CHF. Substantial interindividual variability of platelet characteristics exists in patients with CHF. There were no statistically significant differences when patients were grouped according to incidence of vascular events, emergency revascularization needs, survival, or etiol. of heart failure. Aspirin use did not affect instrument readings either. PCF correlates very poorly with whole blood aggregometry (r2 = 0.023), closure time (r2 = 0.028), platelet GP IIb/IIIa (r2 = 0.0028), and P-selectin (r2 = 0.002) expression. Furthermore, there was no correlation with brain natriuretic peptide concns., a marker of severity and prognosis in heart failure reflecting the neurohumoral status. Patients with heart failure enrolled in the EPCOT Trial exhibited a marginal, sometimes oppositely directed change in platelet function, challenging the diagnostic utility of these platelet parameters and biomarkers to serve as useful tools for the identification of platelet abnormalities, for predicting clin. outcomes, or for monitoring antiplatelet strategies in this population. The usefulness of these measurements for assessing platelets in the different clin. settings remains to be explored. Taken together, opposite to our expectations, major clin. characteristics of heart failure did not correlate well with the platelet characteristics investigated in this study.

CC 14-5 (Mammalian Pathological Biochemistry)

ST glycoprotein selectin **platelet** aggregation heart failure **marker**; brain natriuretic peptide **platelet** activation heart failure

IT **Heart**, **disease**
(failure; platelet parameters and biomarkers to correlate platelet function in patients with **heart** failure)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 4 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5

ACCESSION NUMBER: 2001:292842 CAPLUS

DOCUMENT NUMBER: 135:2488

TITLE: Clinical utility of the platelet function analyzer (PFA-100) for the assessment of the platelet status in patients with congestive heart failure (EPCOT trial)

AUTHOR(S): Serebruany, V. L.; Alford, A. B.; Meister, A. F.; Fuzaylov, S. Y.; Gattis, W. A.; Gurbel, P. A.; O'Connor, C. M.

CORPORATE SOURCE: Johns Hopkins University, Sinai Hospital, Baltimore, MD, USA

SOURCE: Thrombosis Research (2001), 101(6), 427-433
CODEN: THBRAA; ISSN: 0049-3848

PUBLISHER: Elsevier Science Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 25 Apr 2001

AB Background: Data from small studies have shown the presence of platelet abnormalities in patients with congestive heart failure (CHF). We sought to characterize the diagnostic utility of platelet function analyzer (PFA-100) in the CHF population. Methods: Blood samples were obtained for measurement of ADP (ADP)/collagen and epinephrine/collagen shear-induced closure time (CT), whole blood aggregation, **platelet contractile force**, activity of glycoprotein (GP) IIb/IIIa, and P-selectin receptors in 100 consecutive outpatients with CHF. Results: Substantial interindividual variability of platelet characteristics exists in patients with CHF. There were no statistically

significant differences when patients were divided by the incidence of vascular events, emergency revascularization needs, survival, or etiol. of heart failure. Aspirin use did not affect instrument readings as well. CT correlates well with whole blood aggregometry (r2=.587) and less with GP IIb/IIIa activity (r2=.326). No correlation has been observed for the CT with the **platelet**-bound P-selectin (r2=.041) and **platelet contractile force** measures (r2=.028). Conclusions: PFA-100 is indeed capable to serve as a platelet analyzer and may be successfully used as a screening device. However, patients with heart failure enrolled in the EPCOT trial exhibited a marginal, sometimes oppositely directed changes in the platelet function, challenging the diagnostic utility of PFA-100 to serve as a useful tool for the identification of platelet abnormalities, predicting clin. outcomes, or for the monitoring of antiplatelet strategies in this population.

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 14

IT **Heart, disease**
(failure; clin. utility of platelet function analyzer (PFA-100) for assessment of platelet status in patients with congestive **heart** failure (EPCOT trial))

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 5 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6

ACCESSION NUMBER: 2000:521678 CAPLUS
DOCUMENT NUMBER: 133:202796
TITLE: The effect of aspirin and two nitric oxide donors on the **infarcted heart** in situ
AUTHOR(S): Yamamoto, Tadahiko; Kakar, N. Rani; Vina, Ernest R.; Johnson, Paul E.; Bing, Richard J.
CORPORATE SOURCE: Department of Experimental Cardiology, Huntington Medical Research Institutes, Pasadena, CA, 91101, USA
SOURCE: Life Sciences (2000), 67(7), 839-846
CODEN: LIFSAK; ISSN: 0024-3205
PUBLISHER: Elsevier Science Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 01 Aug 2000

AB Nitric oxide (NO) donors are heterogeneous substances which release NO, a biol. active compound NO released by nitric oxide donors has important effects on the circulation by causing vasodilation, diminishing myocardial **contractile force**, inhibiting **platelet** aggregation, and counteracting the effects of thromboxane A2. In the infarcted heart, activation of the inducible form of nitric oxide synthase (iNOS) and the formation of prostacyclin and thromboxane A2 by cyclooxygenase (COX) were increased. Myocardial infarction also resulted in increased myocardial NO production Aspirin (acetylsalicylic acid, ASA) at low concentration (35 mg/kg/day) fails to change iNOS production, in contrast to higher dose (150 mg/kg/day) which, as previously shown, inhibits iNOS activity. ASA at all doses also suppresses myocardial prostanoid formation because of inhibition of COX. Recently, two NO donors have been synthesized: NCX 4016 and Diethylenetriamine/NO (DETA/NO). NCX 4016 combines an NO-releasing moiety with a carboxylic residue via an esteric bond. We describe here that NCX 4016 (65 mg/kg/day) increased prostacyclin and thromboxane A2 production in the infarcted heart muscle, overcoming the inhibitory effects of ASA. As a result of nitric oxide release, oxidation products of NO (NO2- and NO3-; NOx) in arterial blood rose following administration of NCX 4016. On oral administration, NCX 4016 did not change systemic arterial pressure. The effects of a single NO

donor, DETA/NO (1.0 mg/kg/day) on the infarcted heart were also investigated. On i.v. administration, the compound increased NO concentration in arterial blood slightly but to a lesser degree than NCX 4016. Like NCX 4016, it raised myocardial production of prostacyclin and thromboxane A2 in the infarcted heart. However, it caused a severe fall in blood pressure. These findings demonstrate that newly-synthesized NO donors release nitric oxide in situ and increase myocardial production of prostanoids. NCX 4016 has therapeutic potential because it can be orally administered, lacks hypotensive effects, increases blood levels of nitric oxide and myocardial prostacyclin production

CC 1-8 (Pharmacology)

ST aspirin NCX4016 nitric oxide **heart infarction**; diethylenetriamine aspirin vasodilator **heart infarction** NO

IT Vasodilators
(effect of aspirin and two nitric oxide donors on **infarcted heart** in situ)

IT **Heart, disease**
(**infarction**; effect of aspirin and two nitric oxide donors on **infarcted heart** in situ)

IT Prostaglandins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prostanoids; effect of aspirin and two nitric oxide donors on **infarcted heart** in situ)

IT 146724-94-9 175033-36-0, NCX 4016
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effect of aspirin and two nitric oxide donors on **infarcted heart** in situ)

IT 50-78-2, Aspirin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effect of aspirin and two nitric oxide donors on **infarcted heart** in situ)

IT 10102-43-9, Nitric oxide, biological studies 57576-52-0, Thromboxane A2
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(effect of aspirin and two nitric oxide donors on **infarcted heart** in situ)

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 6 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:271229 CAPLUS
DOCUMENT NUMBER: 144:307932
TITLE: Nourin-1 as diagnostic marker for cardiac ischemia and generation of antibodies for its immunodetection
INVENTOR(S): Elgebaly, Salwa A.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 23 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006063198	A1	20060323	US 2004-945442	20040921
US 2006063199	A1	20060323	US 2004-994521	20041123
WO 2006034232	A2	20060330	WO 2005-US33548	20050921

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2004-945442 A2 20040921
US 2004-994521 A 20041123

ED Entered STN: 23 Mar 2006

AB The neutrophil chemotactic activity of Nourin-1 can be used in the early diagnosis of myocardial ischemia and infarction. Nourin-1 is rapidly released by ischemic and infarcted myocardium and found in higher levels in acute cardiac syndrome plasma than in plasma taken from normal healthy subjects. Detecting an elevated level of Nourin-1 in a patient can be useful in distinguishing patients who do not initially present elevated levels of traditional markers. Immunogenic peptide fragments of Nourin-1 are provided for generation of antibodies useful for the immunochem. detection of Nourin-1.

INCL 435007100

CC 9-10 (Biochemical Methods)
Section cross-reference(s): 14

IT Biomarkers
Blood
Blood analysis
Blood plasma
Blood serum
Heart
Human
Immunoassay
Intestinal juice
Mammalia
Platelet activation
Platelet aggregation
Saliva
Thrombus
Urine
Urine analysis
(Nourin-1 as diagnostic **marker** for cardiac ischemia and generation of antibodies for its immunodetection)

IT **Platelet** (blood)
(activated, addnl. diagnostic marker; Nourin-1 as diagnostic marker for cardiac ischemia and generation of antibodies for its immunodetection)

IT **Heart, disease**
Inflammation
(carditis; Nourin-1 as diagnostic marker for cardiac ischemia and generation of antibodies for its immunodetection)

IT **Heart, disease**
(**infarction**; Nourin-1 as diagnostic marker for cardiac ischemia and generation of antibodies for its immunodetection)

IT **Heart, disease**
(ischemia; Nourin-1 as diagnostic marker for cardiac ischemia and generation of antibodies for its immunodetection)
IT **Heart, disease**
(plaque rupture; Nourin-1 as diagnostic marker for cardiac ischemia and generation of antibodies for its immunodetection)

L76 ANSWER 7 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:570130 CAPLUS
DOCUMENT NUMBER: 141:119811
TITLE: Markers for differential diagnosis and methods of use thereof
INVENTOR(S): Buechler, Kenneth F.; Maisel, Alan; Anderberg, Joseph Michael; Mcpherson, Paul H.; Dahlen, Jeffrey R.; Kirchick, Howard J.
PATENT ASSIGNEE(S): Biosite Incorporated, USA
SOURCE: PCT Int. Appl., 191 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 21
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004059293	A2	20040715	WO 2003-US41453	20031223
WO 2004059293	A3	20050331		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004121343	A1	20040624	US 2002-330696	20021227
US 2003199000	A1	20031023	US 2003-371149	20030220
US 2004253637	A1	20041216	US 2003-603891	20030624
US 2004209307	A1	20041021	US 2003-673077	20030926
US 2004219509	A1	20041104	US 2003-714078	20031114
CA 2511501	AA	20040715	CA 2003-2511501	20031223
AU 2003302340	A1	20040722	AU 2003-302340	20031223
EP 1587955	A2	20051026	EP 2003-810896	20031223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

PRIORITY APPLN. INFO.:

US 2002-436301P	P	20021224
US 2002-330696	A	20021227
US 2003-371149	A	20030220
US 2003-603891	A	20030624
US 2003-673077	A	20030926
US 2003-714078	A	20031114
US 2001-835298	A3	20010413
US 2001-288871P	P	20010504
US 2001-313775P	P	20010820
US 2001-315642P	P	20010828
US 2001-334964P	P	20011130
US 2002-346485P	P	20020102
WO 2002-US11441	A2	20020411

US 2002-139086	A2	20020504
WO 2002-US14219	A2	20020504
US 2002-225082	A2	20020820
WO 2002-US26604	A2	20020820
US 2002-436392P	P	20021224
US 2002-331127	A2	20021227
US 2003-389720	A2	20030313
US 2003-410572	A2	20030408
WO 2003-US41453	W	20031223

ED Entered STN: 16 Jul 2004

AB The present invention provides methods for the identification and use of diagnostic markers for differential diagnosis of diseases and/or conditions. In a various aspects, the invention relates to methods and compns. able to determine the presence or absence of one, and preferably a plurality, of diseases or conditions that exhibit one or more similar or identical symptoms. Such methods and compns. can be used to provide assays and assay devices for use in determining the disease or condition underlying one or more non-specific symptoms exhibited in a clin. setting.

IC ICM G01N

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 14

IT **Heart, disease**
(**angina** pectoris, unstable; markers for differential diagnosis and methods of use)

IT **Heart, disease**
(arrhythmia; markers for differential diagnosis and methods of use)

IT **Heart, disease**
(atrial fibrillation; markers for differential diagnosis and methods of use)

IT **Heart, disease**
(cardiomyopathy; markers for differential diagnosis and methods of use)

IT **Artery, disease**
(coronary; markers for differential diagnosis and methods of use)

IT **Heart, disease**
(failure; markers for differential diagnosis and methods of use)

IT **Heart, disease**
(**infarction**; markers for differential diagnosis and methods of use)

IT **Heart, disease**
(ischemia; markers for differential diagnosis and methods of use)

IT **Heart, disease**
(left ventricle, hypertrophy; markers for differential diagnosis and methods of use)

IT C-reactive protein
Fas ligand
Fibronectins
G protein-coupled receptors
Haptoglobin
Interleukin 1
Interleukin 1 receptor antagonist
Interleukin 10
Interleukin 11
Interleukin 13
Interleukin 18
Interleukin 1β
Interleukin 4
Interleukin 6
Lysophosphatidic acids
Macrophage inflammatory protein 1α
Macrophage inflammatory protein 1β

Macrophage inflammatory protein 2α
Macrophage inflammatory protein 2β
Macrophage migration inhibitory factor
Melanoma growth-stimulating activity-α
Monocyte chemoattractant protein-1
Monocyte chemoattractant protein-1
Monocyte chemoattractant protein-2
Myoglobins
Platelet-derived growth factors
Surfactant proteins (pulmonary)
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(markers for differential diagnosis and methods of use)

IT Proteins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**thrombus** precursor; **markers** for differential diagnosis and methods of use)

IT 52-39-1, Aldosterone 58-82-2, Bradykinin 70-18-8, Glutathione, analysis 363-24-6, Prostaglandin E2 997-55-7 2644-64-6, Dipalmitoylphosphatidylcholine 9000-94-6D, Antithrombin III, thrombin comlexes 9000-97-9, Aspartate aminotransferase 9001-12-1, Matrix metalloproteinase 1 9001-60-9, Lactate dehydrogenase 9001-62-1 9001-87-0, Phospholipase d 9001-90-5D, Plasmin, α2-antiplasmin complexes 9002-04-4D, Thrombin, antithrombin III complexes 9003-99-0, Myeloperoxidase 9007-12-9, Calcitonin 9007-43-6, Cytochrome c, analysis 9014-08-8, Enolase 9015-94-5, Renin, analysis 9032-62-6, Phosphoglyceric acid mutase 9035-58-9, Blood-coagulation factor III 9035-74-9, Glycogen phosphorylase 9041-90-1, Angiotensin i 9047-54-5, Urotensin I 11000-17-2, Vasopressin 11128-99-7, Angiotensin ii 12687-51-3, Angiotensin iii 33507-63-0, Substance p 37270-94-3, **Platelet** factor 4 56645-65-9, Procalcitonin 62229-50-9, Egf 75302-16-8, Prothrombin fragment 1+2 79955-99-0, Matrix metalloproteinase 3 83652-28-2, Calcitonin gene related peptide 85637-73-6, Atrial natriuretic peptide 86933-74-6, Neurokinin a 91448-99-6, Cystatin c 109319-16-6 114471-18-0, B-Type natriuretic peptide 115966-23-9, Urodilatin 122879-69-0, Endothelin 2 123626-67-5, Endothelin 1 124861-55-8, TIMP 2 125692-40-2, Endothelin 3 125978-95-2, Nitric oxide synthase 127464-60-2, Vascular endothelial growth factor 130939-66-1, Neurotrophin-3 138757-15-0D, α2-Antiplasmin, plasmin complexes 140208-24-8, TIMP 1 141436-78-4 145267-01-2, Mmp-11 145809-21-8, TIMP 3 146480-35-5, Matrix metalloproteinase 2 146480-36-6, Matrix metalloproteinase 9 151662-24-7, Pace4 154835-90-2, Adrenomedullin 169592-56-7, Caspase 3 238099-75-7, TAFI 376596-92-8, β-Defensin 1 426206-97-5, β-Defensin 2 686719-75-5, NT-proBNP
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(markers for differential diagnosis and methods of use)

L76 ANSWER 8 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:1081991 CAPLUS
DOCUMENT NUMBER: 142:34891
TITLE: Markers for differential diagnosis and methods of use thereof
INVENTOR(S): Buechler, Kenneth F.; Maisel, Alan; Anderberg, Joseph Michael; McPherson, Paul H.; Dahlen, Jeffrey R.; Kirchick, Howard J.
PATENT ASSIGNEE(S): Biosite Incorporated, USA
SOURCE: U.S. Pat. Appl. Publ., 47 pp., Cont.-in-part of U.S.

Ser. No. 410,572.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 21
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004253637	A1	20041216	US 2003-603891	20030624
US 2003022235	A1	20030130	US 2001-835298	20010413
WO 2002083913	A1	20021024	WO 2002-US11441	20020411
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
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CA 2414073	AA	20021114	CA 2002-2414073	20020504
WO 2002089657	A2	20021114	WO 2002-US14219	20020504
WO 2002089657	A3	20030227		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003109420	A1	20030612	US 2002-139086	20020504
EP 1322957	A2	20030702	EP 2002-734211	20020504
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JP 2004520598	T2	20040708	JP 2002-586802	20020504
EP 1666881	A2	20060607	EP 2006-2477	20020504
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WO 2003016910	A1	20030227	WO 2002-US26604	20020820
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003119064	A1	20030626	US 2002-225082	20020820
US 2004121343	A1	20040624	US 2002-330696	20021227
US 2004126767	A1	20040701	US 2002-331127	20021227
US 2003199000	A1	20031023	US 2003-371149	20030220
US 2004171064	A1	20040902	US 2003-389720	20030313
US 2004121350	A1	20040624	US 2003-410572	20030408
US 2004203083	A1	20041014	US 2003-728067	20031203

CA 2511501	AA	20040715	CA 2003-2511501		20031223
WO 2004059293	A2	20040715	WO 2003-US41453		20031223
WO 2004059293	A3	20050331			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
AU 2003302340	A1	20040722	AU 2003-302340		20031223
EP 1587955	A2	20051026	EP 2003-810896		20031223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
CN 1751128	A	20060322	CN 2003-80109839		20031223
JP 2005049351	A2	20050224	JP 2004-238278		20040818
JP 2005121664	A2	20050512	JP 2004-303700		20041019
PRIORITY APPLN. INFO.:			US 2001-835298	A3	20010413
			US 2001-288871P	P	20010504
			US 2001-313775P	P	20010820
			US 2001-315642P	P	20010828
			US 2001-334964P	P	20011130
			US 2002-346485P	P	20020102
			WO 2002-US11441	A2	20020411
			US 2002-139086	A2	20020504
			WO 2002-US14219	A2	20020504
			US 2002-225082	A2	20020820
			WO 2002-US26604	A2	20020820
			US 2002-436301P	P	20021224
			US 2002-436392P	P	20021224
			US 2002-330696	A2	20021227
			US 2002-331127	A2	20021227
			US 2003-371149	A2	20030220
			US 2003-389720	A2	20030313
			US 2003-410572	A2	20030408
			JP 2002-582250	A3	20020411
			EP 2002-734211	A3	20020504
			JP 2002-586802	A3	20020504
			US 2003-603891	A2	20030624
			US 2003-673077	A	20030926
			US 2003-714078	A	20031114
			WO 2003-US41453	W	20031223

ED Entered STN: 17 Dec 2004

AB The present invention provides methods for the identification and use of diagnostic markers for differential diagnosis of diseases. In various aspects, the invention relates to methods and compns. able to determine the presence or absence of one, and preferably a plurality, of diseases that exhibit one or more similar or identical symptoms. Such methods and compns. can be used to provide assays and assay devices for use in determining the disease underlying one or more non-specific symptoms exhibited in a clin. setting.

IC ICM G01N033-53

INCL 435007100; 436518000

CC 9-16 (Biochemical Methods)
Section cross-reference(s): 14

IT **Heart, disease**
(**angina** pectoris, unstable; markers for differential

diagnosis and methods of use)
IT **Heart, disease**
(arrhythmia; markers for differential diagnosis and methods of use)
IT **Heart, disease**
(atrial fibrillation; markers for differential diagnosis and methods of use)
IT **Heart, disease**
(cardiomyopathy; markers for differential diagnosis and methods of use)
IT **Artery, disease**
(coronary; markers for differential diagnosis and methods of use)
IT **Heart, disease**
(failure; markers for differential diagnosis and methods of use)
IT **Heart, disease**
(**infarction**; markers for differential diagnosis and methods of use)
IT **Heart, disease**
(ischemia; markers for differential diagnosis and methods of use)
IT **Heart, disease**
(left ventricle, hypertrophy; markers for differential diagnosis and methods of use)
IT Apolipoproteins
C-reactive protein
Fas ligand
Fibronectins
G protein-coupled receptors
Haptoglobin
Interleukin 1
Interleukin 1 receptor antagonist
Interleukin 10
Interleukin 11
Interleukin 13
Interleukin 18
Interleukin 1β
Interleukin 4
Interleukin 6
Lysophosphatidic acids
Macrophage inflammatory protein 1α
Macrophage inflammatory protein 1β
Macrophage inflammatory protein 2α
Macrophage inflammatory protein 2β
Macrophage migration inhibitory factor
Melanoma growth-stimulating activity-α
Monocyte chemoattractant protein-1
Monocyte chemoattractant protein-1
Monocyte chemoattractant protein-2
Myoglobins
Platelet-derived growth factors
Potassium channel
Proteins
Proteins
Surfactant proteins (pulmonary)
Transcription factors
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(markers for differential diagnosis and methods of use)
IT Proteins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**thrombus** precursor; **markers** for differential diagnosis and methods of use)

IT 52-39-1, Aldosterone 58-82-2, Bradykinin 70-18-8, Glutathione, analysis 363-24-6, Prostaglandin E2 997-55-7 2644-64-6, Dipalmitoylphosphatidylcholine 9000-94-6D, Antithrombin III, thrombin comlexes 9000-97-9, Aspartate aminotransferase 9001-12-1, Matrix metalloproteinase 1 9001-60-9, Lactate dehydrogenase 9001-62-1 9001-87-0, Phospholipase D 9001-90-5D, Plasmin, α2-antiplasmin complexes 9002-04-4D, Thrombin, antithrombin III complexes 9003-99-0, Myeloperoxidase 9007-12-9, Calcitonin 9007-43-6, Cytochrome c, analysis 9014-08-8, Enolase 9015-94-5, Renin, analysis 9032-62-6, Phosphoglyceric acid mutase 9035-58-9, Blood-coagulation factor III 9035-74-9, Glycogen phosphorylase 9041-90-1, Angiotensin I 9047-54-5, Urotensin I 11000-17-2, Vasopressin 11128-99-7, Angiotensin II 12687-51-3, Angiotensin III 33507-63-0, Substance P 37270-94-3, **Platelet** factor 4 56645-65-9, Procalcitonin 62229-50-9, Egf 75302-16-8, Prothrombin fragment 1+2 79955-99-0, Matrix metalloproteinase 3 83652-28-2, Calcitonin gene-related peptide 85637-73-6, Atrial natriuretic peptide 86933-74-6, Neurokinin a 91448-99-6, Cystatin c 109319-16-6 114471-18-0, B-Type natriuretic peptide 115966-23-9, Urodilatin 122879-69-0, Endothelin 2 123626-67-5, Endothelin 1 124861-55-8, TIMP 2 125692-40-2, Endothelin 3 125978-95-2, Nitric oxide synthase 127464-60-2, Vascular endothelial growth factor 130939-66-1, Neurotrophin 3 138757-15-0D, α2-Antiplasmin, plasmin complexes 140208-24-8, TIMP 1 141436-78-4 145267-01-2, MMP-11 145809-21-8, TIMP 3 146480-35-5, Matrix metalloproteinase 2 146480-36-6, Matrix metalloproteinase 9 151662-24-7, PACE4 154835-90-2, Adrenomedullin 169592-56-7, Caspase 3 238099-75-7, TAFI 376596-92-8, β-Defensin 1 426206-97-5, β-Defensin 2 686719-75-5, NT-proBNP
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(markers for differential diagnosis and methods of use)

L76 ANSWER 9 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:513138 CAPLUS
DOCUMENT NUMBER: 141:67804
TITLE: Markers and test devices for symptom-based differential diagnosis and methods of use thereof
INVENTOR(S): Buechler, Kenneth F.; Maisel, Alan
PATENT ASSIGNEE(S): Biosite Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 42 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 21
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004121343	A1	20040624	US 2002-330696	20021227
US 2004253637	A1	20041216	US 2003-603891	20030624
US 2004203083	A1	20041014	US 2003-728067	20031203
CA 2511501	AA	20040715	CA 2003-2511501	20031223
WO 2004059293	A2	20040715	WO 2003-US41453	20031223
WO 2004059293	A3	20050331		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003302340	A1	20040722	AU 2003-302340		20031223
EP 1587955	A2	20051026	EP 2003-810896		20031223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
CN 1751128	A	20060322	CN 2003-80109839		20031223
PRIORITY APPLN. INFO.:			US 2002-436301P	P	20021224
			US 2001-835298	A3	20010413
			US 2001-288871P	P	20010504
			US 2001-313775P	P	20010820
			US 2001-315642P	P	20010828
			US 2001-334964P	P	20011130
			US 2002-346485P	P	20020102
			WO 2002-US11441	A2	20020411
			US 2002-139086	A2	20020504
			WO 2002-US14219	A2	20020504
			US 2002-225082	A2	20020820
			WO 2002-US26604	A2	20020820
			US 2002-436392P	P	20021224
			US 2002-330696	A2	20021227
			US 2002-331127	A2	20021227
			US 2003-371149	A2	20030220
			US 2003-389720	A2	20030313
			US 2003-410572	A2	20030408
			US 2003-603891	A2	20030624
			US 2003-673077	A	20030926
			US 2003-714078	A	20031114
			WO 2003-US41453	W	20031223

ED Entered STN: 25 Jun 2004

AB The present invention provides methods for the identification and use of diagnostic markers, for differential diagnosis of diseases. In various aspects, the invention relates to methods and compns. able to determine the presence or absence of one, and preferably a plurality, of diseases that exhibit one or more similar or identical symptoms. Such methods and compns. can be used to provide assays and assay devices for use in determining the disease underlying one or more non-specific symptoms exhibited in a clin. setting. Levels of pulmonary surfactant protein D, D-dimer, B-type natriuretic peptide (BNP), total cardiac troponin I, and the ratio of BNP:D-dimer in individual patients presenting with clin. dyspnea and in normal subjects were determined by sandwich immunoassay using biotinylated monoclonal antibodies immobilized on avidin microtiter plates and monoclonal antibodies conjugated to alkaline phosphatase. Dyspnea patients were subdivided into patients receiving a clin. diagnosis of congestive heart failure, and those receiving a clin. diagnosis of pulmonary embolism. The differential diagnosis of causes of dyspnea could be accomplished through the measurement of d-dimer, BNP and cardiac troponin.

IC ICM C12Q001-68
ICS G01N033-53; G01N033-567; G01N033-537; G01N033-543
INCL 435006000; X43-5 .72
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 14

IT **Heart, disease**
(**angina** pectoris, diagnosis of; markers and test devices for symptom-based differential diagnosis)

IT **Heart, disease**
(**angina** pectoris, unstable, diagnosis of; markers and test devices for symptom-based differential diagnosis)

IT **Artery, disease**
(aorta, aortic dissection, diagnosis of; markers and test devices for symptom-based differential diagnosis)
IT **Heart, disease**
(arrhythmia, diagnosis of; markers and test devices for symptom-based differential diagnosis)
IT C-reactive protein
Fas ligand
Haptoglobin
Interleukin 1
Interleukin 1 receptor antagonist
Interleukin 10
Interleukin 11
Interleukin 13
Interleukin 18
Interleukin 1β
Interleukin 4
Interleukin 6
Lysophosphatidic acids
Macrophage inflammatory protein 1α
Macrophage inflammatory protein 1β
Macrophage inflammatory protein 2α
Macrophage inflammatory protein 2β
Melanoma growth-stimulating activity-α
Monocyte chemoattractant protein-1
Monocyte chemoattractant protein-2
Myoglobins
Neuregulin 2
Platelet-derived growth factors
Tumor necrosis factors
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as marker; markers and test devices for symptom-based differential diagnosis)
IT **Heart, disease**
(atrial fibrillation, diagnosis of; markers and test devices for symptom-based differential diagnosis)
IT **Heart, disease**
(cardiomyopathy, diagnosis of; markers and test devices for symptom-based differential diagnosis)
IT **Artery, disease**
(coronary, diagnosis of; markers and test devices for symptom-based differential diagnosis)
IT **Heart, disease**
(failure, diagnosis of; markers and test devices for symptom-based differential diagnosis)
IT **Heart, disease**
(**infarction**, diagnosis of; markers and test devices for symptom-based differential diagnosis)
IT **Heart, disease**
(ischemia, diagnosis of; markers and test devices for symptom-based differential diagnosis)
IT **Heart, disease**
(left ventricle, hypertrophy, diagnosis of; markers and test devices for symptom-based differential diagnosis)
IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**thrombus** precursor protein, as **marker**; **markers** and test devices for symptom-based differential

diagnosis)
IT 52-39-1, Aldosterone 58-82-2, Bradykinin 70-18-8, Glutathione, analysis 363-24-6, Prostaglandin E2 542-78-9D, Malondialdehyde, reaction products with LDL 997-55-7 9000-94-6D, Antithrombin III, complexes with thrombin 9001-12-1, Matrix metalloproteinase-1 9001-62-1 9001-87-0, Phospholipase D 9001-90-5D, Plasmin, complexes with α2-antiplasmin 9002-04-4D, Thrombin, complexes with antithrombin III 9004-06-2, Neutrophil elastase 9007-12-9, Calcitonin 9014-08-8, Enolase 9015-94-5, Renin, analysis 9032-62-6, Phosphoglyceric acid mutase 9035-58-9, Blood-coagulation factor III 9035-74-9, Glycogen phosphorylase 9041-90-1, Angiotensin I 11000-17-2, Vasopressin 11128-99-7, Angiotensin II 12687-51-3, Angiotensin III 33507-63-0, Substance P (peptide) 37270-94-3, Blood **platelet** factor 4 56645-65-9, Procalcitonin 60202-16-6, Blood coagulation factor XIV 62229-50-9, EGF 75302-16-8, Prothrombin fragment 1+2 79955-99-0, Matrix metalloproteinase-3 83652-28-2, Calcitonin gene-related peptide 85637-73-6, Atrial natriuretic peptide 86933-74-6, Neurokinin A 91448-99-6, Cystatin C 95918-56-2, Urotensin ii 114471-18-0, B-Type natriuretic peptide 122879-69-0, Endothelin 2 123626-67-5, Endothelin-1 124861-55-8, TIMP2 125692-40-2, Endothelin-3 127464-60-2, Vascular endothelial growth factor 130939-66-1, Neurotrophin 3 138757-15-0D, α2-Antiplasmin, complexes with α2-antiplasmin 140208-24-8, TIMP-1 141436-78-4, Protein Kinase C γ 145267-01-2, Matrix metalloproteinase 11 145809-21-8, TIMP3 146480-35-5, Matrix metalloproteinase-2 146480-36-6, Matrix metalloproteinase-9 151662-24-7, Proteinase, PACE4 169592-56-7, Caspase-3 238099-75-7, TAFI 376596-92-8, .β.-Defensin 1 426206-97-5, .β.-Defensin 2 501433-35-8, Inducible nitric oxide synthase
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as marker; markers and test devices for symptom-based differential diagnosis)

L76 ANSWER 10 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:646163 CAPLUS
DOCUMENT NUMBER: 142:277381
TITLE: **Markers** of coronary **thrombus** formation
AUTHOR(S): Soejima, Hirofumi; Kishikawa, Hideki; Ogawa, Hisao
CORPORATE SOURCE: Health Center, Kumamoto University, Japan
SOURCE: Sentan Iryo Shirizu (2004), 28(Shizobyo), 279-283
CODEN: SISEBJ
PUBLISHER: Sentan Iryo Gijutsu Kenkyusho
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
ED Entered STN: 12 Aug 2004
AB A review. The topics discussed are (1) platelet aggregation and coagulation and fibrosis responses in the onset of coronary thrombosis; (2) thrombogenesis markers, tissue factor, monocyte chemoattractant protein-1, macrophages and tissue factor pathway inhibitor (TFPI) as coagulation markers; (3) tissue-type plasminogen activator (t-PA) and plasminogen activator inhibitor (PAI) in fibrosis and PAI in prediction of coronary events; and (4) platelet microaggregate formation in correlation with outcome of coronary artery disease.
CC 14-0 (Mammalian Pathological Biochemistry)
IT Biomarkers
Blood coagulation
Human
Platelet aggregation

(biomarkers of coronary thrombosis)
IT **Artery, disease**
(coronary, thrombosis; biomarkers of coronary thrombosis)

L76 ANSWER 11 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:818613 CAPLUS
DOCUMENT NUMBER: 139:305910
TITLE: Onset of force development as a **marker** of **thrombin** generation
INVENTOR(S): Carr, Marcus, Jr.
PATENT ASSIGNEE(S): Hemodyne, Inc., USA
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2003085400	A1	20031016	WO 2003-US10201		20030403
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
AU 2003223428	A1	20031020	AU 2003-223428		20030403
US 2003199428	A1	20031023	US 2003-405472		20030403
PRIORITY APPLN. INFO.:			US 2002-369559P	P	20020404
			US 2002-387409P	P	20020611
			WO 2003-US10201	W	20030403

ED Entered STN: 17 Oct 2003
AB **Platelet contractile force** (PCF) is used as a surrogate marker of thrombin generation. PCF generation occurs concomitant with the burst of prothrombin fragment F 1+2 release. The time between assay start and PCF onset is identified as the thrombin generation time (TGT), and is used in assessing risk of bleeding, in diagnosing various disorders, and in monitoring the effects of pharmaceutical and other treatments. TGT is prolonged in clotting factor deficiencies and in the presence of direct and indirect thrombin inhibitors. TGT shortens to normal with clotting factor replacement and shortens with administration of rVIIa. TGT is short in thrombophilic states such as coronary artery disease, diabetes and thromboangiitis obliterans and prolongs toward normal with oral and i.v. anticoagulants.
IC ICM G01N033-53
CC 14-6 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 1
ST clotting **platelet contractile force** bioassay thrombin generation time anticoagulant; diagnosis coronary disease diabetes thromboangiitis obliterans **platelet** assay thrombin
IT **Platelet** (blood)
(**contractile force**; onset of **force** development as **marker** of **thrombin** generation)
IT **Artery, disease**
(coronary; onset of force development as **marker** of

thrombin generation)
IT Blood coagulation
(deficiencies; onset of force development as **marker** of **thrombin** generation)
IT Anticoagulants
Bioassay
Biomarkers
Blood
Diabetes mellitus
Diagnosis
Human
(onset of force development as **marker** of **thrombin** generation)
IT Thrombosis
(thromboangiitis obliterans; onset of force development as **marker** of **thrombin** generation)
IT 9002-04-4, **Thrombin**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(generation time; onset of force development as **marker** of **thrombin** generation)
IT 9002-04-4D, **Thrombin**, inhibitors
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(onset of force development as **marker** of **thrombin** generation)
IT 9001-26-7, Prothrombin
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(prothrombin fragment F 1+2; onset of force development as **marker** of **thrombin** generation)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 12 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:181729 CAPLUS
DOCUMENT NUMBER: 137:163674
TITLE: The effects of hydroxy-methyl-glutaryl co-enzyme A reductase inhibitors on **platelet** thrombus formation
AUTHOR(S): Thompson, Paul D.; Moyna, Niall M.; Michael White, C.; Weber, Kelly M.; Giri, Satyendra; Waters, David D.
CORPORATE SOURCE: Division of Cardiology, Section of Preventive Cardiology, Hartford Hospital, Hartford, CT, 06102, USA
SOURCE: Atherosclerosis (Shannon, Ireland) (2002), 161(2), 301-306
CODEN: ATHSBL; ISSN: 0021-9150
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 14 Mar 2002
AB Background: Hydroxy-methyl-glutaryl co-enzyme A reductase inhibitors (HMG CoA RIs) markedly improve the lipid profile of patients with hypercholesterolemia, but the magnitude and time course of the effect of these drugs on other risk factors for atherosclerosis are not well defined. Methods: the authors employed a random assignment, double-blind design to compare the effect of 8 wk of HMG CoA RI therapy with either pravastatin (40 mg QD; n=12) or simvastatin (20 mg QD; n=12) with placebo (n=13) on serum lipids, platelet thrombus formation (PTF), and markers of inflammation and thrombosis in patients with coronary artery disease. PTF

was measured using a validated ex vivo perfusion chamber system. Results: Total and LDL cholesterol decreased 20.3±12.7% and 31.4±16.5% in the HMG CoA RI group and were unchanged with placebo (P<0.01). Triglycerides also decreased 15.3±22.5% with HMG CoA RI therapy, but increased 8.4±30.0% with placebo (P=0.01). PTF increased 54.1±89.0% with placebo and decreased 8.0±46.82% with HMG CoA RI treatment (P<0.01). Conclusions: HMG CoA RI therapy with pravastatin or simvastatin reduces PTF after only 8 wk of therapy. Such lipid effects may contribute to the prompt reduction in cardiovascular events noted in some clin. trials.

CC 1-10 (Pharmacology)

ST statin antihypercholesterolemic **platelet** thrombus **atherosclerosis**; pravastatin simvastatin antihypercholesterolemic **platelet** thrombus **atherosclerosis**

IT Antiarteriosclerotics
(antiatherosclerotics; effects of HMG CoA reductase inhibitors on **platelet thrombus** formation, lipid parameters and **markers** of inflammation and thrombosis in humans in relation to **atherosclerosis**)

IT Lipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(blood; effects of HMG CoA reductase inhibitors on **platelet thrombus** formation, lipid parameters and **markers** of inflammation and thrombosis in humans in relation to **atherosclerosis**)

IT **Artery, disease**
(coronary; effects of HMG CoA reductase inhibitors on **platelet thrombus** formation, lipid parameters and **markers** of inflammation and thrombosis in humans in relation to **atherosclerosis**)

IT Anticholesteremic agents
Atherosclerosis
Human
Hypercholesterolemia
Platelet (blood)
Thrombosis
Thrombus
(effects of HMG CoA reductase inhibitors on **platelet thrombus** formation, lipid parameters and **markers** of inflammation and thrombosis in humans in relation to **atherosclerosis**)

IT C-reactive protein
Fibrinogens
Glycerides, biological studies
High-density lipoproteins
Low-density lipoproteins
Very-low-density lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effects of HMG CoA reductase inhibitors on **platelet thrombus** formation, lipid parameters and **markers** of inflammation and thrombosis in humans in relation to **atherosclerosis**)

IT 57-88-5, Cholesterol, biological studies 9000-94-6, Antithrombin 9001-25-6, Blood-coagulation factor VII 9002-04-4, Thrombin 139639-23-9, Tissue-type plasminogen activator 140208-23-7, Plasminogen activator inhibitor-1
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(effects of HMG CoA reductase inhibitors on **platelet thrombus** formation, lipid parameters and **markers** of inflammation and thrombosis in humans in relation to **atherosclerosis**)

IT 79902-63-9, Simvastatin 81093-37-0, Pravastatin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effects of HMG CoA reductase inhibitors on **platelet thrombus** formation, lipid parameters and **markers** of inflammation and thrombosis in humans in relation to **atherosclerosis**)
IT 9028-35-7, Hydroxymethylglutaryl coenzyme A reductase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors, statins; effects of HMG CoA reductase inhibitors on **platelet thrombus** formation, lipid parameters and **markers** of inflammation and thrombosis in humans in relation to **atherosclerosis**)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 13 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:137042 CAPLUS
DOCUMENT NUMBER: 134:159900
TITLE: Method of using **platelet contractile force** and whole **blood clot elastic** modulus as clinical **markers**
INVENTOR(S): Carr, Marcus E., Jr.; Krischnaswami, Ashok; Martin, Erika
PATENT ASSIGNEE(S): Hemodyne, Inc., USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2001012211	A1	20010222	WO 2000-US21848		20000811
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
CA 2380972	AA	20010222	CA 2000-2380972		20000811
EP 1210101	A1	20020605	EP 2000-957363		20000811
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL					
JP 2003507693	T2	20030225	JP 2001-516556		20000811
AU 778160	B2	20041118	AU 2000-68995		20000811
PRIORITY APPLN. INFO.:			US 1999-148595P	P	19990813
			WO 2000-US21848	W	20000811

ED Entered STN: 25 Feb 2001
AB **Platelet contractile force** and/or clot elastic modulus measurements are used to identify patients at risk for atherosclerosis or for bleeding during surgical procedures or other applications. Measurements which are elevated are indicative of atherosclerosis, and measurements which are reduced are indicative of a bleeding risk.
IC ICM A61K038-00

ICS A61K038-48; C12Q001-56; C12Q001-68; G01N033-86
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 14
ST **platelet contractile force blood clot elastic** modulus **marker; atherosclerosis marker platelet contractile force;** bleeding risk **blood clot elastic** modulus
IT **Heart, disease**
(**angina** pectoris, monitoring treatment of; method of using **platelet contractile force** and whole **blood clot elastic** modulus as clin. **markers**)
IT Young's modulus
(**blood clot**; method of using **platelet contractile force** and whole **blood clot elastic** modulus as clin. **markers**)
IT **Artery, disease**
(coronary; method of using **platelet contractile force** and whole **blood clot elastic** modulus as clin. **markers**)
IT **Heart, disease**
(**infarction**, monitoring treatment of; method of using **platelet contractile force** and whole **blood clot elastic** modulus as clin. **markers**)
IT Surgery
(**markers** for bleeding during; method of using **platelet contractile force** and whole **blood clot elastic** modulus as clin. **markers**)
IT **Atherosclerosis**
Blood analysis
Diabetes mellitus
Diagnosis
Hemorrhage
Hypercholesterolemia
Platelet (blood)
Risk assessment
Thrombus
(method of using **platelet contractile force** and whole **blood clot elastic** modulus as clin. **markers**)
IT **Force**
(**platelet contractile**; method of using **platelet contractile force** and whole **blood clot elastic** modulus as clin. **markers**)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 14 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:784244 CAPLUS
DOCUMENT NUMBER: 136:95824
TITLE: Uniform platelet activation exists before coronary stent implantation despite aspirin therapy
AUTHOR(S): Serebruany, Victor L.; Cummings, Charles C.; Malinin, Alex I.; Steinhubl, Steven R.; Gurbel, Paul A.
CORPORATE SOURCE: Center for Thrombosis Research, Sinai Hospital, Baltimore, MD, 21215, USA

SOURCE: American Heart Journal (2001), 142(4), 611-616
CODEN: AHJOA2; ISSN: 0002-8703
PUBLISHER: Mosby, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 29 Oct 2001
AB Platelets play an important role in the natural history of coronary artery disease. Enhanced platelet aggregation and receptor expression unquestionably occur after coronary stent implantation; however, the functional characteristics of platelets before stenting have not been fully elucidated. **Platelets** were assessed before intervention by **platelet**-rich plasma aggregation (PA) with 5 μmol ADP and 1 μg/mL collagen; whole blood aggregation (WBA) by 1 μg/mL collagen; shear-induced closure time (CT); **contractile force** (CF); and expression of 9 surface receptors by flow cytometry in 126 patients undergoing elective coronary artery stent placement. All patients received aspirin for at least 7 days. The data were compared with those from 64 healthy volunteers. Each test revealed sustained platelet activation in patients undergoing coronary stenting compared with control values. These differences were significant for collagen-induced PA (P =.031); CF (P =.0001); expression of glycoprotein (GP) IIb/IIIa (P =.0001); P-selectin (P =.0008); platelet/endothelial cell adhesion mol. (PECAM)-1 (P =.0001); CD107a (P =.0001); CD107b (P =.0004); and CD63 (P =.009). Platelets are indeed activated before coronary stenting despite antecedent therapy with aspirin.
CC 1-8 (Pharmacology)
IT **Artery, disease**
(coronary; uniform platelet activation exists before coronary stent implantation despite aspirin therapy)
REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L76 ANSWER 15 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1988:53674 CAPLUS
DOCUMENT NUMBER: 108:53674
TITLE: Mechanisms of platelet-activating factor-induced cardiac depression in the isolated perfused rat heart
AUTHOR(S): Stahl, Gregory L.; Lefer, Allan M.
CORPORATE SOURCE: Jefferson Med. Coll., Thomas Jefferson Univ., Philadelphia, PA, 19107, USA
SOURCE: Circulatory Shock (1987), 23(3), 165-77
CODEN: CRSHAG; ISSN: 0092-6213
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 20 Feb 1988
AB In isolated rat hearts perfused at constant flow **platelet**-activating factor (PAF) produced a dose-dependent increase in coronary perfusion pressure (CPP) and a decrease in **contractile force** (CF). At the peak of the PAF response, coronary effluent contained LTC4, LTD4, and LTE4 and TxB2. Addition of specific PAF receptor antagonists inhibited peptide leukotriene and TXB2 production and blocked the coronary vasoconstriction and decrease in contractile force. Cyclooxygenase inhibitors or specific TXA2 receptor antagonists failed to prevent the increase in CPP or the decrease in CF. A lipoxygenase inhibitor or a specific LTD4 receptor antagonist prevented the increase in CPP but did not antagonize the neg. inotropic response. Apparently, the coronary constriction in the isolated perfused rat heart is a result of the PAF-induced release of endogenous peptide leukotrienes but not TXA2 production The neg. inotropic response appears to be partly due to a direct neg. inotropic action of PAF on cardiac muscle. Thus, PAF produces a

variety of direct actions and indirect effects via release of eicosanoid mediators contributing to cardiac impairment in the rat heart.
CC 14-5 (Mammalian Pathological Biochemistry)
IT **Heart, disease** or disorder
(blood platelet-activating factor effects on coronary constriction and cardiac contraction in relation to)

L76 ANSWER 16 OF 32 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1972:70759 CAPLUS
DOCUMENT NUMBER: 76:70759
TITLE: Thromboelastographic studies of the whole blood and oxalate plasma in subjects with coronary **atherosclerosis** in the ischemic stage
AUTHOR(S): Bezborod'ko, B. N.; Batrak, A. A.
CORPORATE SOURCE: Zaporozh. Med. Inst., Zaporozhe, USSR
SOURCE: Terapevticheskii Arkhiv (1971), 43(11), 53-5
CODEN: TEARAI; ISSN: 0040-3660
DOCUMENT TYPE: Journal
LANGUAGE: Russian
ED Entered STN: 12 May 1984
AB Thromboelastographic investigation in 101 subjects showed a hypercoagulation tendency during atherosclerosis in the ischemic stage. Disturbance of the blood coagulation process was noted in all phases but was more pronounced in the III phase which was caused by increased fibrogen levels and the inhibition of the fibrinolytic activity. Use of the thromboelasto-graphic method was suggested as a supplement to biochem. investigation but not as a replacement for it.
CC 14 (Mammalian Pathological Biochemistry)
ST thromboelastography hypercoagulation ischemia; **atherosclerosis** thromboelastography ischemia; fibrinogen 11 ischemia; blood coagulation **atherosclerosis**; heart **atherosclerosis** thromboelastography
IT **Atherosclerosis**
(coronary, thromboelastic properties in)
IT Thrombus and **Blood clot**
(**elastic** properties of, in coronary **atherosclerosis**
)
IT Fibrinogens
RL: BIOL (Biological study)
(in **atherosclerosis**)
IT 9001-90-5
RL: BIOL (Biological study)
(in **atherosclerosis**)

L76 ANSWER 17 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 2
ACCESSION NUMBER: 2002:425099 BIOSIS
DOCUMENT NUMBER: PREV200200425099
TITLE: Evaluation of platelets in **heart** failure: Is platelet activity related to etiology, functional class, or clinical outcomes?.
AUTHOR(S): Gurbel, Paul A. [Reprint author]; Gattis, Wendy A.; Fuzaylov, Sergey F.; Gaulden, Laura; Hasselblad, Vic; Serebruany, Victor L.; O'Connor, Christopher M.
CORPORATE SOURCE: Sinai Center for Thrombosis Research, 2401 W Belvedere Ave, Hoffberger Building, Ste 56, Baltimore, MD, 21215, USA
Pgurbel@Sinai-balt.com

SOURCE: American Heart Journal, (June, 2002) Vol. 143, No. 6, pp. 1068-1075. print.
CODEN: AHJOA2. ISSN: 0002-8703.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 7 Aug 2002
Last Updated on STN: 7 Aug 2002

AB Objectives We sought to determine whether platelet activity in patients with **heart** failure is related to an ischemic versus nonischemic etiologic condition, clinical **disease** severity, or adverse clinical outcomes. Background Platelet activity may affect outcome in patients with **heart** failure. A prospective evaluation of the relation of baseline platelet function to etiologic condition, New York **Heart** Association (NYHA) class, and clinical outcomes has not been previously reported. Methods Ninety-six consecutive outpatients with ambulatory **heart** failure with an ejection fraction <0.40 and NYHA Class II to IV symptoms who presented to the Duke **Heart** Failure Clinic and 14 healthy control subjects formed the study groups. Baseline characteristics and blood analyzed for thromboxane (Tx) B2, 6-keto PGF1alpha, **platelet contractile force**, adenosine diphosphate/collagen shear-induced closure time, whole blood aggregation and CD41, CD31, CD62p, and CD51/CD61 by flow cytometry were determined. Survival status and hospitalizations were determined in the **heart** failure patient cohort. Results The median age of patients was 65 years (22% female, 64% white). An ischemic etiologic condition was present in 61% of patients. The population had mild to moderate **heart** failure: NYHA class I (1%), II (41%), III (46%), and IV (12.5%) and severe ventricular dysfunction (median ejection fraction = 0.20). There were 39 clinical events (7 deaths, 3 cardiac transplants, 29 other first hospitalizations) in 305 median days of observation. Platelet activity, indicated by whole blood aggregation with 5 mumol adenosine diphosphate (P = .04) and Tx B2 (P = .01), was higher in patients with **heart** failure. Whole blood aggregation was greater than the 90th percentile in 22% of patients with **heart** failure versus 7% of control subjects. Platelet function did not differ for any of the markers between the ischemic and nonischemic groups and was not affected by antecedent aspirin. There was no relation of NYHA class or the occurrence of events to platelet activity. Conclusion Platelet activity is heightened in 22% of outpatients with stable **heart** failure symptoms and is not affected by antecedent aspirin therapy. The degree of platelet activation is similar in ischemic and nonischemic patients with **heart** failure and is not related to clinical **disease** severity. Current methods to assess platelet activation do not appear to predict outcome.

IT Major Concepts
Cardiovascular Medicine (Human Medicine, Medical Sciences); Hematology (Human Medicine, Medical Sciences)
IT Parts, Structures, & Systems of Organisms
heart: circulatory system; platelet: blood and lymphatics
IT Diseases
heart failure: **heart diseaseheart failure: heart disease, complications, etiology**
Heart Failure, Congestive (MeSH)
IT Chemicals & Biochemicals
6-keto prostaglandin F 1-alpha; ADP: hematologic-drug; CD31; CD41; CD51; CD61; CD62p; thromboxane B-2

L76 ANSWER 18 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:136335 BIOSIS

DOCUMENT NUMBER: PREV200600132348
TITLE: Platelet-derived microparticles promote clot stability.
AUTHOR(S): Loncar, Robert [Reprint Author]; Dzepina, Daniel; Stoldt, Volker; Zotz, Reiner B.; Scharf, Rudiger E.
CORPORATE SOURCE: Univ Dusseldorf, Med Ctr Duesseldorf, Dept Hemostasis and Transfus Med, D-4000 Dusseldorf, Germany
SOURCE: Blood, (NOV 16 2005) Vol. 106, No. 11, Part 2, pp. 64B. Meeting Info.: 47th Annual Meeting of the American-Society-of-Hematology. Atlanta, GA, USA. December 10 -13, 2005. Amer Soc Hematol. CODEN: BLOOAW. ISSN: 0006-4971.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 22 Feb 2006
Last Updated on STN: 22 Feb 2006

AB Microparticles (MP) are the plasma membrane fragments. They are formed along with membrane remodelling processes of most stimulated eukaryotic cells or generated upon cellular stimulation including platelets. After having been considered "inert cell debris' previously, recent findings suggested that MP can modulate distinct cellular responses in the related microenvironment. For example, the concentration of circulating platelet-derived MP is increased in acute myocardial **infarction** and stroke. It is hypothesized that platelet-derived MP promote hemostasis and thrombosis. However, the precise role of MP is still unknown. In this study, we evaluated the influence of platelet-derived MP on clot stability. Anticoagulated blood (3.8% sodium citrate) was obtained from healthy blood donors. Platelet-rich plasma was centrifuged at 1500g (10 min, 22 degrees C). The pelleted platelets were washed three times in PBS (pH 7.4), resuspended in I nil of the same buffer and activated with human collagen of type I (10 min, 35 degrees C) at a final concentration of 10 mu g/ml. The supernatant (1500g 10 min, 22 degrees C) containing activated platelet MP was centrifuged at 13,000g (30 min, 4 degrees C). The pellet of MP was resuspended in 450 mu l of PBS. MP were identified by scanning electron microscopy and flow cytometry following immunolabelling with an anti-GPIb alpha FITC-monoclonal antibody. The influence of platelet MP onto clot stability, determined as **platelet contractile force** (PCF) and **clot elastic** modulus (CEM), was evaluated with a Hemodyne haemostasis analyzer (Hemodyne, Richmond, USA). Mean PCF and CEM in blood of healthy donors (n = 7) were 6.5 +/- 3 Kdynes and 9.6 +/- 6 Kdynes/cm(2), respectively. Addition of 100 VI of platelet-derived MP increased PCF (forces generated by platelets within a clot) without reaching statistical significance (mean increase of 11% as compared to controls without MP). By contrast, addition of platelet MP significantly enhanced CEM as measure of clot stability from 9.6 +/- 6 Kdynes/cm(2) to 94 +/- 62 Kdynes/cm(2), ($p < 0.05$). In experiments conducted with platelet-rich plasma or platelet-poor plasma instead of anticoagulated whole blood, no influence of added platelet-derived MP on clot stability was observed. In a patient with thrombocytopenia (70,000/mu l) supplementation of whole blood with platelet MP increased CEM by 70%. Our ex vivo experiments demonstrate that collagen-induced platelet-derived MP can modulate clot stability. However, this effect is restricted to anticoagulated whole blood and not observed in platelet-rich plasma or plasma alone. Therefore, interaction of platelet-derived MP with other cellular elements than platelets, e.g. monocytes, may be relevant to promote clot stability. In general, microparticles may be a pharmacological target in the management of hemostatic disorders.

IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport

and Circulation)
IT Parts, Structures, & Systems of Organisms
blood: blood and lymphatics; platelet: blood and lymphatics
IT Chemicals & Biochemicals
microparticles

L76 ANSWER 19 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:327819 BIOSIS
DOCUMENT NUMBER: PREV200300327819
TITLE: Development of **platelet contractile force** as a research and clinical measure of platelet function.
AUTHOR(S): Carr, Marcus E. Jr. [Reprint Author]
CORPORATE SOURCE: Coagulation Special Studies Lab., Div. of Hematol./Oncol., Central Virginia Ctr. for Coagul. Disorders, Dpts. of Medicine and Pathol., Med. College of Virginia and Richmond Veterans Admin. Med. Ctr., Virginia Commonwealth University, Richmond, VA, 23298, USA
mcarr@hsc.vcu.edu
SOURCE: Cell Biochemistry and Biophysics, (2003) Vol. 38, No. 1, pp. 55-78. print.
ISSN: 1085-9195.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Jul 2003
Last Updated on STN: 16 Jul 2003

AB This article reviews work performed at the Medical College of Virginia of Virginia Commonwealth University during the development of a whole-blood assay of platelet function. The new assay is capable of assessing platelet function during clotting and thus allows measurement of the contribution of platelets to thrombin generation. Because platelets are monitored in the presence of thrombin, the test gages platelets under conditions of maximal activation. Three parameters are simultaneously assessed on one 700-muL sample of citrated whole blood. **Platelet contractile force** (PCF), the **force** produced by platelets during clot retraction, is directly measured as a function of time. This parameter is sensitive to platelet number, platelet metabolic status, glycoprotein Ilb/IIIa status, and the presence of antithrombin activities. **Clot elastic** modulus (CEM), also measured as a function of time, is sensitive to fibrinogen concentration, platelet concentration, the rate of thrombin generation, the flexibility of red cells, and the production of force by platelets. The third parameter, the thrombin generation time (TGT) is determined from the PCF kinetics curve. Because PCF is absolutely thrombin dependent (no thrombin-no force), the initial upswing in PCF occurs at the moment of thrombin production. TGT is sensitive to clotting factor deficiencies, clotting factor inhibitors, and the presence of antithrombins, all of which prolong the TGT and are known to be hemophilic states. Treatment of hemophilic states with hemostatic agents shortens the TGT toward normal. TGT has been demonstrated to be shorter and PCF to be increased in coronary artery disease, diabetes mellitus, and several other thrombophilic states. Treatment of thrombophilic states with a variety of heparin and nonheparin anticoagulants prolongs the TGT toward normal. The combination of PCF, CEM, and TGT measured on the same sample may allow rapid assessment of global hemostasis and the response to a variety of procoagulant and anticoagulant medications.

IT Major Concepts
Blood and Lymphatics (Transport and Circulation)

IT Parts, Structures, & Systems of Organisms
platelet: blood and lymphatics, **contractile force**
IT Diseases
clotting factor deficiency: blood and lymphatic disease
IT Diseases
coronary artery **disease**: **heart disease**, vascular **disease**
Coronary **Disease** (MeSH)
IT Diseases
diabetes mellitus: endocrine disease/pancreas, metabolic disease
Diabetes Mellitus (MeSH)
IT Chemicals & Biochemicals
antithrombins; glycoprotein IIb/IIIa; thrombin [EC 3.4.21.5]

L76 ANSWER 20 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:17874 BIOSIS
DOCUMENT NUMBER: PREV200300017874
TITLE: Reductions in **platelet contractile force** correlate with duration of cardiopulmonary bypass and blood loss in patients undergoing cardiac surgery.
AUTHOR(S): Greilich, Philip E. [Reprint Author]; Brouse, Chad F.; Carr, Marcus E.
CORPORATE SOURCE: Department of Anesthesiology and Pain Management Service, University of Texas Southwestern and Dallas Veteran Affairs Medical Center, 4500 South Lancaster Road, 112A, Dallas, TX, 75216, USA
philip.greilich@utsouthwestern.edu
SOURCE: Thrombosis Research, (July 15 2002) Vol. 107, No. 1-2, pp. 83-84. print.
CODEN: THBRAA. ISSN: 0049-3848.
DOCUMENT TYPE: Letter
LANGUAGE: English
ENTRY DATE: Entered STN: 25 Dec 2002
Last Updated on STN: 25 Dec 2002
IT Major Concepts
Cardiovascular Medicine (Human Medicine, Medical Sciences); Hematology (Human Medicine, Medical Sciences); Surgery (Medical Sciences)
IT Parts, Structures, & Systems of Organisms
heart: circulatory system; platelet: blood and lymphatics
IT Diseases
blood loss: blood and lymphatic disease, injury, complications
IT Chemicals & Biochemicals
CD42b: expression, regulation; CD61: expression, regulation; heparin: anticoagulant-drug, hematologic-drug

L76 ANSWER 21 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:536593 BIOSIS
DOCUMENT NUMBER: PREV200100536593
TITLE: Alterations of platelet aggregation kinetics with ultraviolet laser emission: The "Stunned platelet" phenomenon.
AUTHOR(S): Topaz, On [Reprint author]; Minisi, Anthony J.; Bernardo, Nelson L.; McPherson, Richard A.; Martin, Erika; Carr, Sheryl L.; Carr, Marcus E., Jr.
CORPORATE SOURCE: Division of Cardiology, McGuire VA Medical Center, Medical College of Virginia, Virginia Commonwealth University, 1201

Broad Rock Blvd., Richmond, VA, 23249, USA
SOURCE: Thrombosis and Haemostasis, (October, 2001) Vol. 86, No. 4, pp. 1087-1093. print.
CODEN: THHADQ. ISSN: 0340-6245.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 14 Nov 2001
Last Updated on STN: 25 Feb 2002

AB Platelets, a major constituent of thrombus, play a crucial role in the pathogenesis of acute ischemic coronary syndromes. The effect of ultraviolet laser emission on platelets within thrombi is unknown. The effects of increasing levels of laser energy on platelets in whole blood were investigated. Blood samples were obtained by aseptic venipuncture and anticoagulated with 3.8% sodium citrate. Samples were exposed to increased levels (0, 30, 45, 60 mJ/mm2; 25 Hz) of ultraviolet excimer laser fluence (308 nm wave-length) and then tested for ADP and collagen induced platelet aggregation, platelet concentration, and for **platelet contractile force** (PCF) development.
Scanning electron microscopy was used to detect laser induced morphologic changes of platelets and by flow cytometric analysis to detect changes in expression of platelet surface antigens p-selectin (CD 62) and glycoprotein IIb/IIIa (CD 43). Exposure to excimer laser energy produced dose dependent suppression of platelet aggregation and force development ("stunned platelets"). ADP aggregation decreased from 8.0 +- 1.1 Ohms (mean +- SEM) to 3.7 +- 0.8 Ohms ($p < 0.001$) to 2.7 +- 0.6 Ohms ($p < 0.001$) and to 1.8 +- 0.5 Ohms ($p < 0.001$) as the laser energy increased from 0 to 30 to 45 to 60 mJ/mm2, respectively. Collagen induced aggregation decreased from 21.4 +- 1.4 Ohms to 15.7 +- 1.2 Ohms ($p < 0.001$) to 11.7 +- 1.1 Ohms ($p < 0.001$) and to 9.9 +- 1.0 Ohms ($p < 0.001$), in response to the same incremental range of laser energy. **Platelet contractile forces** declined from 34,500 +- 3700 to 27,800 +- 2700 dynes as laser energy increased from 0 to 60 mJ/mm2 ($p < 0.03$). Platelet concentration did not change with increasing laser energy. The expression of platelet surface antigen p-selectin (CD 62) remained stable through increasing levels of laser energy exposures while the percentage of CD 43 positive platelets significantly increased with exposure to laser energy, yet the level of expression did not exceed 0.5% of cells. Thus, aggregation kinetics are altered in platelets exposed to ultraviolet laser energy as manifested by decreased platelet aggregation and reduction in platelet force development capability. The response is dose dependent and most pronounced at higher energy levels such as 60 mJ/mm2.

IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation)
IT Parts, Structures, & Systems of Organisms
blood: blood and lymphatics; platelets: blood and lymphatics
IT Diseases
coronary thrombosis: **heart disease**, vascular **disease**
Coronary Thrombosis (MeSH)

L76 ANSWER 22 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:198699 BIOSIS
DOCUMENT NUMBER: PREV200200198699
TITLE: Reductions in **platelet contractile force** correlate with duration of cardiopulmonary bypass and blood loss in patients undergoing cardiac surgery.

AUTHOR(S): Greilich, Philip E. [Reprint author]; Carr, Marcus E.; Brouse, Chad [Reprint author]; Martin, Erika J.; Beckham, Joseph [Reprint author]; Augustus, Melanie [Reprint author]; Estrera, Aaron [Reprint author]
CORPORATE SOURCE: Anesthesiology and Pain Management, Dallas VA Medical Center, Dallas, TX, USA
SOURCE: Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 252a. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology, Part 1. Orlando, Florida, USA. December 07-11, 2001. American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Mar 2002
Last Updated on STN: 20 Mar 2002

AB Blood loss secondary to platelet dysfunction is known to increase when the duration of cardiopulmonary bypass (CPB) is prolonged. **Platelet contractile force**, a novel measure of platelet function, has been shown to be elevated in some patients at increased thrombotic risk and decreased in some patients at increased hemorrhagic risk. **Platelet contractile force** has also been shown to decrease following CPB. These reductions in **platelet contractile force** may be partially due to alterations in platelet adhesion receptor function. The relationships between **platelet contractile force, platelet** receptor expression and duration of CPB have not been established. We hypothesized that the degree of platelet dysfunction would correlate with duration of CPB and blood loss. This study also investigated the influence of platelet adhesion receptors on reductions in **platelet contractile force.** After signed, informed consent, 28 patients undergoing CPB were enrolled in an IRB approved protocol. Platelet function was assessed at four time points: prior to CPB (baseline), prior to separation from CPB, within two hours of completion of CPB, and 24 hours following the completion of CPB. All patients received a standardized anesthetic and surgical procedure that included epsilon-aminocaproic acid as prophylactic antifibrinolytic therapy. **Platelet contractile force, platelet** aggregation, CD61 and CD42b expression were measured in whole blood. Reductions in **platelet contractile force** and **platelet** aggregation were calculated as percent of the baseline and plotted versus CPB time and blood loss. The relationship between alterations in **platelet contractile force** and CD61 and 42b expression were also evaluated. Reductions in **platelet contractile force** (n=28)significantly correlated with duration of CPB (r=0.564; pltoreq0.05) and blood loss (r=0.545; pltoreq0.05). In 10 of the 28 patients, CD61 and CD42b were measured. In this subset, decreases in **platelet contractile force** correlated with reductions platelet expression of CD42b: (r=0.697; pltoreq0.05) and of activated CD61 (r=0.744; pltoreq0.05). In this subset of 10 patients, reductions in **platelet contractile force** continued to significantly correlate with duration of CPB (r=0.791; pltoreq0.0064) and blood loss (r=0.673; pltoreq0.05). Platelet aggregations were done on blood samples from 5 of the 28 patients. In this subset of 5 patients, platelet aggregation declined with CPB time (r=0.975; pltoreq0.0048). These findings are consistent with acquired platelet dysfunction during CPB. The degree of platelet dysfunction, as demonstrated by decreased

platelet contractile force and **platelet** aggregation, appears to increase as a function of CPB time. Reductions in **platelet contractile force** correlate with alterations in platelet receptor expression and increasing blood loss. The appropriate utilization of near-patient, platelet function monitors during CPB requires additional definition.

IT Major Concepts
Cardiovascular Medicine (Human Medicine, Medical Sciences); Clinical Chemistry (Allied Medical Sciences); Hematology (Human Medicine, Medical Sciences); Surgery (Medical Sciences)

IT Parts, Structures, & Systems of Organisms
blood: blood and lymphatics; **heart**: circulatory system; platelet: blood and lymphatics, aggregation

IT Diseases
blood loss: blood and lymphatic disease, complications

IT Diseases
platelet dysfunction: blood and lymphatic disease, diagnosis

IT Chemicals & Biochemicals
CD42b: expression, platelet adhesion receptor, regulation; CD61: expression, platelet adhesion receptor, regulation

L76 ANSWER 23 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2000:46777 BIOSIS
DOCUMENT NUMBER: PREV200000046777
TITLE: **Platelet contractile force** and **clot elastic** modulus are abnormal in high risk chest pain patients in the emergency department.
AUTHOR(S): Krishnaswami, Ashok [Reprint author]; Kontos, Michael C. [Reprint author]; Martin, Erika J. [Reprint author]; Jesse, Robert L. [Reprint author]; Vetrovec, George W. [Reprint author]; Carr, Marcus E., Jr. [Reprint author]
CORPORATE SOURCE: Internal Medicine, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA, USA
SOURCE: Blood, (Nov. 15, 1999) Vol. 94, No. 10 SUPPL. 1 PART 2, pp. 69b. print.
Meeting Info.: Forty-first Annual Meeting of the American Society of Hematology. New Orleans, Louisiana, USA. December 3-7, 1999. The American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 26 Jan 2000
Last Updated on STN: 31 Dec 2001

IT Major Concepts
Blood and Lymphatics (Transport and Circulation); Cardiovascular System (Transport and Circulation)

IT Diseases
chest pain: **heart disease**
Chest Pain (MeSH)

IT Diseases
coronary artery disease: heart disease, vascular disease
Coronary **Disease** (MeSH)

IT Diseases
myocardial infarction: heart disease, vascular disease
Myocardial **Infarction** (MeSH)

L76 ANSWER 24 OF 32 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on

STN
ACCESSION NUMBER: 2000:42962 BIOSIS
DOCUMENT NUMBER: PREV200000042962
TITLE: In vitro addition of platelet activating factor to whole blood does not alter **platelet contractile force.**
AUTHOR(S): Carr, Marcus E., Jr. [Reprint author]; Martin, Erika J. [Reprint author]
CORPORATE SOURCE: Departments of Medicine and Pathology, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA, USA
SOURCE: Blood, (Nov. 15, 1999) Vol. 94, No. 10 SUPPL. 1 PART 2, pp. 63b. print.
Meeting Info.: Forty-first Annual Meeting of the American Society of Hematology. New Orleans, Louisiana, USA. December 3-7, 1999. The American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 26 Jan 2000
Last Updated on STN: 31 Dec 2001
IT Major Concepts
Cardiovascular Medicine (Human Medicine, Medical Sciences); Blood and Lymphatics (Transport and Circulation)
IT Diseases
atherosclerosis: vascular disease
Arteriosclerosis (MeSH)
IT Diseases
coronary artery **disease**: **heart disease**,
vascular **disease**
Coronary **Disease** (MeSH)
IT Chemicals & Biochemicals
platelet activating factor

L76 ANSWER 25 OF 32 MEDLINE on STN
ACCESSION NUMBER: 2004511905 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15481628
TITLE: Monitoring of hemostatic status in four patients being treated with recombinant factor VIIa.
AUTHOR: Carr Marcus E Jr; Martin Erika J; Kuhn Jan G; Ambrose Heather; Fern Stephen; Bryant Paulette C
CORPORATE SOURCE: Coagulation Special Studies Laboratory, Medical College of Virginia, Virginia Commonwealth University, Richmond 23298-0230, USA.. mcarr@hsc.vcu.edu
SOURCE: Clinical laboratory, (2004) Vol. 50, No. 9-10, pp. 529-38.
Journal code: 9705611. ISSN: 1433-6510.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200502
ENTRY DATE: Entered STN: 15 Oct 2004
Last Updated on STN: 4 Feb 2005
Entered Medline: 3 Feb 2005
AB Recombinant Factor VIIa (rVIIa) is a potent hemostatic agent for the management of refractory bleeding in patients with Factor VII deficiency or Factor VIII inhibitors. While the current recommended dose is usually effective, the most appropriate dose remains a subject of debate. Since factor VII levels and shortening of the pro-thrombin time do not appear to

correlate with response, an appropriate laboratory **marker** of clinical response has not been identified. In this article we report changes noted in thrombin generation, **platelet** function and clot structure in blood from patients treated with rVIIa. Thrombin generation was assessed via a thrombin generation time (TGT) assay using a Hemodyne HAS instrument. Changes in clot structure were assessed as changes in **clot elastic modulus** in the HAS, changes in maximum amplitude in the TEG and changes in maximum clot firmness in the ROTEG. The cases presented confirmed improvement in thrombin generation with administration of rVIIa. The cases also illustrate that: a) in the factor VII deficient patient, 25% of the 90 microg/kg dose is sufficient to totally correct the defect, b) patients with high level factor VIII inhibitors may require significantly more than the recommended dose of 90 microg/kg, c) thrombin generation may not be completely corrected despite dramatic shortening of the prothrombin time, and d) increasing rVIIa doses does not by itself ensure improved thrombin generation.

CT Check Tags: Female; Male
Aged
Biological Markers
Blood Coagulation: DE, drug effects
Blood Coagulation: PH, physiology
*Blood Coagulation Disorders: DT, drug therapy
Blood Coagulation Disorders: ME, metabolism
Blood Platelets: DE, drug effects
Blood Platelets: PH, physiology
Child
*Drug Monitoring
Elasticity: DE, drug effects
*Factor VII: TU, therapeutic use
Factor VII Deficiency: DT, drug therapy
Factor VII Deficiency: ME, metabolism
Factor VIII: AI, antagonists & inhibitors
*Hemostasis
Hemostasis: DE, drug effects
*Hemostatics: TU, therapeutic use
Humans
Middle Aged
*Recombinant Proteins: TU, therapeutic use
Thrombin: DE, drug effects
Thrombin: ME, metabolism

L76 ANSWER 26 OF 32 MEDLINE on STN
ACCESSION NUMBER: 2004357531 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15264185
TITLE: Enhanced anticoagulant activity of enoxaparin in patients with ESRD as measured by thrombin generation time.
AUTHOR: Brophy Donald F; Martin Erika J; Gehr Todd W B; Carr Marcus E Jr
CORPORATE SOURCE: Department of Pharmacy Practice, Virginia Commonwealth University/Medical College of Virginia, Richmond, VA, USA.. dbrophy@vcu.edu
SOURCE: American journal of kidney diseases : the official journal of the National Kidney Foundation, (2004 Aug) Vol. 44, No. 2, pp. 270-7.
Journal code: 8110075. E-ISSN: 1523-6838.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200501

ENTRY DATE: Entered STN: 21 Jul 2004
Last Updated on STN: 15 Jan 2005
Entered Medline: 14 Jan 2005

AB BACKGROUND: Patients with renal dysfunction who undergo systemic anticoagulation with enoxaparin are at increased risk for bleeding. Although there is decreased renal clearance of enoxaparin in this population, the clinical utility of monitoring antifactor Xa activity is controversial because it is weakly correlated to bleeding. The goal of this study was to investigate the role of other novel anticoagulation **markers**, such as thrombin generation time, **platelet contractile force**, and **clot elastic modulus**, while controlling for antifactor Xa activity in patients with and without renal dysfunction. METHODS: Thirty anticoagulant- and antiplatelet-naive subjects completed this trial (10 controls, 10 patients with chronic kidney disease, and 10 patients with end-stage renal disease [ESRD]). Blood samples were obtained and spiked ex vivo with increasing concentrations of enoxaparin antifactor Xa activity (0.25, 0.5, 1.0, and 3.0 IU/mL). Thrombin generation time, **platelet contractile force**, and **clot elastic modulus** were measured in each group at each antifactor Xa activity concentration. RESULTS: Subjects with ESRD had an approximately 50% greater anticoagulant effect, determined by thrombin generation time prolongation, than controls at antifactor Xa activity concentrations of 0.5 to 3.0 IU/mL. This may explain why subjects with ESRD with seemingly therapeutic antifactor Xa levels still experience adverse bleeding. There were no intergroup differences in **platelet** function, determined by **platelet contractile force** and **clot elastic modulus.** CONCLUSION: Antifactor Xa poorly predicts the degree of anticoagulation in patients with ESRD administered low-molecular-weight heparin (LMWH). Thrombin generation time may be a clinically useful anticoagulation monitoring tool to monitor LMWH therapy, especially in patients with renal dysfunction. Additional randomized prospective studies are needed to corroborate these findings.

CT Check Tags: Female; Male
Adult
Anticoagulants: AE, adverse effects
*Anticoagulants: PD, pharmacology
Anticoagulants: TU, therapeutic use
*Blood Coagulation: DE, drug effects
Blood Coagulation Tests
Chronic Disease
Comparative Study
Enoxaparin: AE, adverse effects
*Enoxaparin: PD, pharmacology
Enoxaparin: TU, therapeutic use
Factor Xa: AI, antagonists & inhibitors
Hemorrhagic Disorders: CI, chemically induced
Humans
Kidney Diseases: BL, blood
Kidney Failure, Chronic: BL, blood
Middle Aged
Platelet Function Tests
Prospective Studies
Research Support, Non-U.S. Gov't
*Thrombin: BI, biosynthesis

L76 ANSWER 27 OF 32 MEDLINE on STN
ACCESSION NUMBER: 2002738258 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12476239
TITLE: Enhanced platelet force development despite drug-induced

inhibition of platelet aggregation in patients with thromboangiitis obliterans--two case reports.
AUTHOR: Carr Marcus E Jr; Hackney Mary H; Hines Susan J; Heddinger Steven P; Carr Sheryl L; Martin Erika J
CORPORATE SOURCE: Departments of Medicine and Pathology, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298-0230, USA.. mcarr@hsc.vcu.edu
SOURCE: Vascular and endovascular surgery, (2002 Nov-Dec) Vol. 36, No. 6, pp. 473-80.
Journal code: 101136421. ISSN: 1538-5744.
PUB. COUNTRY: United States
DOCUMENT TYPE: (CASE REPORTS)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200304
ENTRY DATE: Entered STN: 28 Dec 2002
Last Updated on STN: 4 Apr 2003
Entered Medline: 3 Apr 2003

AB Thromboangiitis obliterans (TAO) is a nonatherosclerotic, nonnecrotizing, nonspecific, segmental inflammatory obliterative vasculitis, characterized by decreased flow to the distal extremities and increased risk of amputation. While smoking cessation is viewed as critical to successful treatment, various therapeutic options have been employed. While many treatment regimens seek to diminish platelet function, there are relatively few studies of platelet function in this disease entity and even fewer that have offered evidence of increased platelet activity. The authors report here 2 cases of TAO in which evaluations for hypercoagulable states and of platelet function were performed. **Platelet contractile force** (PCF) was found to be 82% higher than a normal control in 1 TAO patient and 340% higher than normal in the second patient. This was true despite the fact that platelet aggregations confirmed suppression of aggregation by antiplatelet medications. Elevated PCF has been seen in a variety of conditions, such as coronary artery disease and diabetes mellitus, in which endothelial function is abnormal. Whether high PCF values play a role in the pathogenesis of these diseases or simply serve as **markers** of enhanced platelet function and/or endothelial dysfunction awaits additional evaluations.

CT Check Tags: Male
Adult
*Blood Platelets: PH, physiology
Clot Retraction
Elasticity
Humans
Platelet Aggregation: PH, physiology
*Platelet Aggregation Inhibitors: TU, therapeutic use
Platelet Function Tests
Smoking: AE, adverse effects
*Thromboangiitis Obliterans: DT, drug therapy

L76 ANSWER 28 OF 32 MEDLINE on STN
ACCESSION NUMBER: 2002413050 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12167384
TITLE: Whole blood impedance aggregometry for the assessment of platelet function in patients with congestive **heart** failure (EPCOT Trial).
AUTHOR: Serebruany V; McKenzie M; Meister A; Fuzaylov S; Gurbel P; Atar D; Gattis W; O'Connor C
CORPORATE SOURCE: Sinai Hospital, Johns Hopkins University, Baltimore, MD

21215, USA.. heartdrug@aol.com
SOURCE: European journal of heart failure : journal of the Working Group on Heart Failure of the European Society of Cardiology, (2002 Aug) Vol. 4, No. 4, pp. 461-7.
Journal code: 100887595. ISSN: 1388-9842.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200210
ENTRY DATE: Entered STN: 9 Aug 2002
Last Updated on STN: 30 Oct 2002
Entered Medline: 29 Oct 2002

AB OBJECTIVE: Data from small studies have shown the presence of platelet abnormalities in patients with congestive **heart** failure (CHF). We sought to characterize the diagnostic utility of the whole blood aggregometry (WBA) in a random outpatient CHF population. METHODS: Blood samples were obtained for measurement of whole blood aggregation, shear-induced closure time, **platelet contractile force**, expression of GP IIb/IIIa, and P-selectin in 100 consecutive patients with CHF. RESULTS: Substantial inter-individual variability of platelet characteristics exists in patients with CHF. There were no statistically significant differences when patients were divided by the incidence of vascular events, emergency revascularization needs, survival, or etiology of **heart** failure. Surprisingly, aspirin use did not affect instrument readings as well. Whole blood aggregometry correlates well with the closure time (r(2)=0.587), and with GP IIb/IIIa expression (r(2)=0.435). Significant but less strong correlation has been observed for the WBA with **platelet** P-selectin expression (r(2)=0.295), and no correlation was present for the **platelet contractile force** measures (r(2)=0.030). CONCLUSIONS: Despite the fact that patients with **heart** failure enrolled in the EPCOT trial exhibited marginal, sometimes oppositely directed changes, in their platelet characteristics, whole blood impedance aggregometry is indeed capable to serve as a valuable diagnostic tool, and may be successfully used as an established screening device in this population. Ability of the whole blood aggregometry to predict clinical outcomes, or for the monitoring of anti-platelet agents in CHF patients, will be evaluated in the ongoing clinical trials.

CT Check Tags: Female; Male
Aged
Comparative Study
Flow Cytometry
***Heart Failure, Congestive: BL, blood**
Humans
Middle Aged
P-Selectin: BL, blood
*Platelet Aggregation: PH, physiology
*Platelet Function Tests: MT, methods
Predictive Value of Tests
Prognosis
Research Support, Non-U.S. Gov't

L76 ANSWER 29 OF 32 MEDLINE on STN
ACCESSION NUMBER: 2001161289 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11259926
TITLE: Diabetes mellitus: a hypercoagulable state.
AUTHOR: Carr M E
CORPORATE SOURCE: Departments of Internal Medicine and Pathology, Medical

College of Virginia, Virginia Commonwealth University, Box 980230, Richmond, VA 23298-0230, USA.. mcarr@hsc.vcu.edu
SOURCE: Journal of diabetes and its complications, (2001 Jan-Feb) Vol. 15, No. 1, pp. 44-54. Ref: 43
Journal code: 9204583. ISSN: 1056-8727.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 21 May 2001
Last Updated on STN: 21 May 2001
Entered Medline: 17 May 2001

AB Eighty percent of patients with diabetes mellitus die a thrombotic death. Seventy-five percent of these deaths is due to cardiovascular complications, and the remainder is due to cerebrovascular events and peripheral vascular complications. Vascular endothelium, the primary defense against thrombosis, is abnormal in diabetes. Endothelial abnormalities undoubtedly play a role in the enhanced activation of platelets and clotting factors seen in diabetes. Coagulation activation **markers**, such as prothrombin activation fragment 1+2 and thrombin-anti-thrombin complexes, are elevated in diabetes. The plasma levels of many clotting factors including fibrinogen, factor VII, factor VIII, factor XI, factor XII, kallikrein, and von Willebrand factor are elevated in diabetes. Conversely, the level of the anticoagulant protein C (PC) is decreased. The fibrinolytic system, the primary means of removing clots, is relatively inhibited in diabetes due to abnormal clot structures that are more resistant to degradation and an increase in plasminogen activator inhibitor type 1 (PAI-1). Increased circulating **platelet** aggregates, increased **platelet** aggregation in response to **platelet** agonists, increased **platelet contractile force** (PCF), and the presence of higher plasma levels of **platelet** release products, such as beta-thromboglobulin, **platelet** factor 4, and thromboxane B(2), demonstrate **platelet** hyperactivity in diabetes. This constellation of findings supports the clinical observation that diabetes is a hypercoagulable state. This article briefly reviews the published evidence for this conclusion and the putative roles played by hyperglycemia and hyperinsulinemia in its development.

CT Anticoagulants: BL, blood
*Blood Coagulation
Blood Coagulation Factors: ME, metabolism
*Diabetes Mellitus: BL, blood
Diabetes Mellitus: PP, physiopathology
Diabetic Angiopathies: BL, blood
Diabetic Angiopathies: MO, mortality
*Diabetic Angiopathies: PP, physiopathology
Humans
Thrombophilia: BL, blood
Thrombophilia: CO, complications
*Thrombophilia: PP, physiopathology
Thrombosis: MO, mortality

L76 ANSWER 30 OF 32 MEDLINE on STN
ACCESSION NUMBER: 91240009 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1852056
TITLE: Effects of **platelet**-activating factor on beta- and H2-receptor-mediated increase of myocardial **contractile force** in isolated perfused

guinea pig **hearts.**

AUTHOR: Felix S B; Baumann G; Niemczyk M; Ahmad Z; Hashemi T; Berdel W E

CORPORATE SOURCE: Department of Medicine I, Klinikum rechts der Isar, Technische Universitat Munchen, Federal Republic of Germany.

SOURCE: Research in experimental medicine. Zeitschrift fur die gesamte experimentelle Medizin einschliesslich experimenteller Chirurgie, (1991) Vol. 191, No. 1, pp. 1-9. Journal code: 0324736. ISSN: 0300-9130.

PUB. COUNTRY: GERMANY: Germany, Federal Republic of

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199106

ENTRY DATE: Entered STN: 14 Jul 1991
Last Updated on STN: 14 Jul 1991
Entered Medline: 24 Jun 1991

AB Platelet-activating factor (PAF) has been termed an important mediator of cardiovascular shock due to immunological reactions, including anaphylaxis and endotoxic reactions. Previous studies have shown that PAF is a potent cardiodepressive agent inducing a drastic coronary constriction and a sustained impairment of myocardial contractility. In this study, an attempt was made to further characterize the prolonged PAF effects on coronary circulation and myocardial contractile force in the isolated guinea pig **heart** perfused at constant pressure. An intracoronary PAF bolus (0.18 nmol, related to coronary flow rates of 1 ml/min) induced a precipitous decrease of coronary flow rates, left ventricular pressure, and left ventricular contraction (peak positive dP/dt), which was followed by a slow increase reaching new steady state after 15 min (-48%, -40%, -42% below baseline, respectively). If the specific PAF antagonist WEB 2086 (3.65 nmol/min, related to coronary flow rates of 1 ml/min) was infused 30 min after PAF administration, the prolonged PAF-mediated cardio-depressive effects were rapidly reversed. Several studies indicate that PAF induces a down regulation of beta-adrenoreceptors in different cell types, including human lung tissue. Therefore, a further objective of the study was to evaluate whether PAF selectively impairs the positive inotropic effects of beta-receptor agonists or also inhibits the contractile effects of inotropic drugs, which are known to enhance cardiac contractility independently of beta-receptors. In these experiments, the beta-agonist isoproterenol and the H2-agonist impromidine were administered as intracoronary boluses (0.35 nmol and 0.14 nmol, respectively, related to coronary flow rates of 1 ml/min) prior to PAF injection and 30 min after PAF.(ABSTRACT TRUNCATED AT 250 WORDS)

CT
Animals
Azepines: PD, pharmacology
Coronary Circulation: DE, drug effects
Drug Interactions
Guanidines: PD, pharmacology
Guinea Pigs
Heart Rate: DE, drug effects
Imidazoles: PD, pharmacology
Impromidine
Isoproterenol: PD, pharmacology
*Myocardial Contraction: DE, drug effects
*Platelet Activating Factor: PD, pharmacology
*Receptors, Adrenergic, beta: DE, drug effects
Receptors, Adrenergic, beta: PH, physiology
*Receptors, Histamine H2: DE, drug effects

Receptors, Histamine H2: PH, physiology
Research Support, Non-U.S. Gov't
Triazoles: PD, pharmacology

L76 ANSWER 31 OF 32 MEDLINE on STN
ACCESSION NUMBER: 90258484 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1692934
TITLE: Prostacyclin inhibits the platelet-dependent effects of platelet-activating factor in the rabbit isolated **heart.**
AUTHOR: Alloatti G; Montrucchio G; Camussi G
CORPORATE SOURCE: Dipartimento di Biologia Animale, Universita degli Studi di Torino, Italy.
SOURCE: Journal of cardiovascular pharmacology, (1990 May) Vol. 15, No. 5, pp. 745-51.
Journal code: 7902492. ISSN: 0160-2446.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199006
ENTRY DATE: Entered STN: 20 Jul 1990
Last Updated on STN: 29 Jan 1996
Entered Medline: 27 Jun 1990

AB In a previous study we showed that platelet-activating factor (PAF) is released in the coronary effluent early after reperfusion of ischemic, isolated rabbit **heart.** The amounts released were sufficient to induce intracoronary platelet activation and release of secondary mediators, suggesting a relevant contribution of this mediator to the cardiac dysfunction during reperfusion. We examined the modulatory effect of prostaglandin I2 (PGI2) on the cardiac alterations caused by infusion of PAF and autologous platelets in rabbit isolated **heart.** The intra-coronary infusion of PAF (10 ng-1 microgram) in the presence of autologous **platelets** induced marked alterations in the electrical and mechanical activities in rabbit **heart,** characterized by a transient positive inotropic effect (mean +/- SD = 113 +/- 6.1% of the control at 10 ng, 116 +/- 11.6% at 1 microgram), followed by a decrease in coronary flow (76 +/- 6.5 and 57 +/- 8.1%), **contractile force** (88 +/- 2.5 and 56 +/- 10.6%), and action potential duration (APD, 87 +/- 2.5 and 83 +/- 4.9%), and by conduction arrhythmias (75 and 100% of cases). The infusion of adenosine (1 x 10(-5) M) to increase coronary flow maximally abolished PAF and **platelet**-dependent reduction in coronary flow (CF) and **contractile force,** as well as conduction arrhythmias, but not the early transient positive inotropic effect. The alterations induced by platelets and PAF infusion were not affected by treatment of **hearts** with aspirin (3 x 10(-4) M), indicating that endogenous PGI2 generation did not affect the platelet-dependent response of the rabbit **heart** to PAF.(ABSTRACT TRUNCATED AT 250 WORDS)

CT Adenosine: PD, pharmacology
Animals
*Blood Platelets: PH, physiology
Coronary Circulation: DE, drug effects
Dose-Response Relationship, Drug
Electrophysiology
*Epoprostenol: PD, pharmacology
***Heart: DE, drug effects**
Hemodynamic Processes: DE, drug effects
In Vitro
Myocardial Contraction: DE, drug effects

*Platelet Activating Factor: AI, antagonists & inhibitors
Platelet Activating Factor: PD, pharmacology
Rabbits
Research Support, Non-U.S. Gov't

L76 ANSWER 32 OF 32 MEDLINE on STN
ACCESSION NUMBER: 90335553 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2379035
TITLE: Effects of **platelet** activating factor on **contractile force** and 45Ca fluxes in guinea-pig isolated atria.
AUTHOR: Diez J; Delpon E; Tamargo J
CORPORATE SOURCE: Instituto de Farmacologia y Toxicologia, Facultad de Medicina, Universidad Complutense, Madrid, Spain.
SOURCE: British journal of pharmacology, (1990 Jun) Vol. 100, No. 2, pp. 305-11.
Journal code: 7502536. ISSN: 0007-1188.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199009
ENTRY DATE: Entered STN: 12 Oct 1990
Last Updated on STN: 12 Oct 1990
Entered Medline: 13 Sep 1990

AB 1. The effects of **platelet** activating factor (PAF) were studied on the electromechanical properties and 45Ca2+ fluxes of guinea-pig isolated atria. 2 Both in spontaneously beating and electrically driven atria, PAF (10(-12)-10(-7) M) increased atrial rate but produced a biphasic effect on **contractile force.** At low concentrations (up to 10(-10) M) it produced a positive inotropic effect, while at higher concentrations PAF exerted a negative inotropic effect. A similar biphasic effect was observed in the slow contractions elicited by isoprenaline in K(+)-depolarized atrial fibres. 3. The positive inotropic effect of PAF was prevented by verapamil, whereas pretreatment of atria with propranolol, phentolamine, indomethacin or atropine did not modify its positive and negative inotropic actions. BN 52021, a specific PAF antagonist, abolished both the positive and negative inotropic effects. 4. PAF had no effect on the characteristics of the action potentials recorded in either normally polarized or K(+)-depolarized (slow action potential) atrial fibres. 5. At concentrations at which it increased contractile force, PAF potentiated the contractile responses to Ca2+ (0.9-9 mM), whereas at negative inotropic concentrations it inhibited them. The negative inotropic effect of PAF was partially reversed in 70% Na+ medium. 6. At 10(-11) M, PAF increased 45Ca2+ uptake and reduced the rate coefficient (kcm) for the 45Ca2+ efflux. This increase in 45Ca2+ uptake was abolished in atria pretreated with verapamil or BN 52021. However, 10(-7) M PAF modified neither 45Ca2+ uptake nor efflux in atrial muscle.(ABSTRACT TRUNCATED AT 250 WORDS)

CT Check Tags: Female; Male
Action Potentials: DE, drug effects
Animals
*Calcium: ME, metabolism
Calcium: PD, pharmacology
Calcium Radioisotopes: DU, diagnostic use
Cell Membrane: DE, drug effects
Cell Membrane: ME, metabolism
*Diterpenes
Guinea Pigs
***Heart: DE, drug effects**

In Vitro
Lactones: PD, pharmacology
Microelectrodes
Muscle Contraction: DE, drug effects
*Myocardial Contraction: DE, drug effects
*Myocardium: ME, metabolism
Platelet Activating Factor: AI, antagonists & inhibitors
*Platelet Activating Factor: PD, pharmacology
Research Support, Non-U.S. Gov't
Sodium: PD, pharmacology
Verapamil: PD, pharmacology

L77 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:429540 CAPLUS
DOCUMENT NUMBER: 142:480782
TITLE: CDIM-binding antibodies in combination therapy of B cell disorders
INVENTOR(S): Neelima, M. Bhat; Marcia, M. Bieber; Nelson, N. H. Teng; **Martin, E. Sanders**
PATENT ASSIGNEE(S): Palingen, Inc., USA
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005044998	A2	20050519	WO 2004-US37137	20041105
WO 2005044998	A3	20051103		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2005112130	A1	20050526	US 2004-982698	20041105
PRIORITY APPLN. INFO.:			US 2003-517775P P	20031105

AB The authors disclose treatment of lymphoid cancer, autoimmune disease or B cell hyperproliferation. The treatment comprises administration of (1) a cytotoxic amount of an antibody having specific binding for CDIM epitopes on a B cell, and (2) a cytotoxic agent. In one example, the authors demonstrate enhanced cytotoxicity against B-ALL blasts by vincristine in combination with anti-CDIM IgM.

L77 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:802144 CAPLUS
DOCUMENT NUMBER: 137:345831
TITLE: Aspirin and mortality from coronary bypass surgery
AUTHOR(S): Mangano, Dennis T.; Saidman, L.; Levin, J.; Barash, P.; Dietzel, C.; Herskowitz, A.; Ley, C.; Hsu, P.;

Kardatzke, D.; Wang, S.; Tudor, I. C.; Beatty, D.; Xavier, B.; Kerkela, S.; Aronson, S.; Comunale, M.; D'Ambra, M.; Eaton, M.; Engelman, R.; Fitch, J.; Grichnik, K.; Hantler, C. B.; Hillel, Z.; Kanchuger, M.; Ostrowski, J.; Mathew, J.; Fontes, M.; McSweeney, M.; Wolman, R.; Napolitano, C. A.; Nesbitt, L. A.; Nijhawan, N.; Nussmeier, N.; Pivalizza, E. G.; Polson, S.; Ramsey, J.; Roach, G.; Schwann, N.; Shenaq, S.; Shevde, K.; Shore-Lesserson, L.; Bronheim, D.; Wahr, J.; Spiess, B.; Wallace, A.; Metzler, H.; Ansley, D.; O'Connor, J. P.; Cheng, D.; Cote, D.; Duke, P.; Dupuis, J. Y.; Hynes, M.; Finnegan, B.; Martineau, R.; Couture, P.; Mazer, D.; Villalba, J. C.; Colmenares, M. E.; Girard, C.; Isetta, C.; Greim, C. A.; Roewer, N.; Hoeft, A.; Loeb, R.; Radke, J.; Mollhoff, T.; Motsch, J.; **Martin, E.**; Ott, E.; Ueberfuhr, P.; Scholz, J.; Tonner, P.; Sonntag, H.; Szekely, A.; Juneja, R.; Mani, G.; Siregar, E.; Drenger, B.; Gozal, Y.; Elami, E.; Tommasino, C.; Luna, P.; Roekaerts, P.; DeLange, S.; Pfitzner, R.; Filipescu, D.; Prakanrattana, U.; Duthie, D. J. R.; Feneck, R. O.; Fox, M. A.; Park, J. D.; Smith, D.; Vohra, A.; Vuylsteke, A.; Latimer, R. D.

CORPORATE SOURCE: Multicenter Study of Perioperative Ischemia Research Group, Ischemia Res. Education Foundation, San Francisco, CA, 94134, USA

SOURCE: New England Journal of Medicine (2002), 347(17), 1309-1317
CODEN: NEJMAG; ISSN: 0028-4793

PUBLISHER: Massachusetts Medical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB There is no therapy known to reduce the risk of complications or death after coronary bypass surgery. Because platelet activation constitutes a pivotal mechanism for injury in patients with atherosclerosis, we assessed whether early treatment with aspirin could improve survival after coronary bypass surgery. At 70 centers in 17 countries, we prospectively studied 5065 patients undergoing coronary bypass surgery, of whom 5022 survived the first 48 h after surgery. We gathered data on 7500 variables per patient and adjudicated outcomes centrally. The primary focus was to discern the relation between early aspirin use and fatal and nonfatal outcomes. During hospitalization, 164 patients died (3.2 %), and 812 others (16.0 %) had nonfatal cardiac, cerebral, renal, or gastrointestinal ischemic complications. Among patients who received aspirin (up to 650 mg) within 48 h after revascularization, subsequent mortality was 1.3 % (40 of 2999 patients), as compared with 4.0 % among those who did not receive aspirin during this period (81 of 2023, P<0.001). Aspirin therapy was associated with a 48 % reduction in the incidence of myocardial infarction (2.8 % vs. 5.4 %, P<0.001), a 50 % reduction in the incidence of stroke (1.3 % vs. 2.6 %, P = 0.01), a 74 % reduction in the incidence of renal failure (0.9 % vs. 3.4 %, P<0.001), and a 62 % reduction in the incidence of bowel infarction (0.3 % vs. 0.8 %, P = 0.01). Multivariate anal. showed that no other factor or medication was independently associated with reduced rates of these outcomes and that the risk of hemorrhage, gastritis, infection, or impaired wound healing was not increased with aspirin use (odds ratio for these adverse events, 0.63; 95 % confidence interval, 0.54 to 0.74). Early use of aspirin after coronary bypass surgery is safe and is associated with a reduced risk of death and ischemic complications involving the heart, brain, kidneys, and gastrointestinal tract.

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L77 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:245679 CAPLUS
DOCUMENT NUMBER: 137:153217
TITLE: Nitric oxide production by neutrophils obtained from patients during acute coronary syndromes: Expression of the nitric oxide synthase isoforms
AUTHOR(S): Sanchez de Miguel, Lourdes; Arriero, M. Mar; Farre, Jeronimo; Jimenez, Petra; Garcia-Mendez, Antonio; de Frutos, Trinidad; Jimenez, Ana; Garcia, Rosa; Cabestrero, Fernando; Gomez, Juan; de Andres, Raimundo; Monton, Mercedes; **Martin, Edita**; De la Calle-Lombana, Luz M.; Rico, Luis; Romero, Jose; Lopez-Farre, Antonio
CORPORATE SOURCE: Cardiovascular Research and Hypertension Laboratory, Fundacion Jimenez Diaz, Madrid, Spain
SOURCE: Journal of the American College of Cardiology (2002), 39(5), 818-825
CODEN: JACCDI; ISSN: 0735-1097
PUBLISHER: Elsevier Science Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To analyze the differences in the nitric oxide (NO) forming system between neutrophils obtained from patients during unstable angina (UA) and during acute myocardial infarction (AMI). Neutrophils are involved in the regulation of thrombus formation through the release of active substances such as NO. Acute myocardial infarction is the result of an occlusive thrombus; unstable angina is attributed to intermittent thrombus formation. We studied 49 patients admitted to hospital within 24 h after the onset of chest pain: 31 experienced AMI and 18 experienced UA. Acute myocardial infarction was defined as CK greater than two-fold the upper limit of normal value of biochem. laboratory, with CK-MB >10% total CK. Unstable angina was defined as transient ST segment changes without significant increases in CK and CK-MB. The amount of NO generated by neutrophils from AMI patients was significantly higher than that generated by neutrophils from UA patients. Neutrophils from UA and AMI patients showed low levels of endothelial-like NO synthase protein expression and a marked expression of the inducible NO synthase (iNOS) isoform. Although neutrophils from patients during acute coronary syndromes generated high amts. of NO, they did not demonstrate an increased ability to stimulate cyclic guanosine monophosphate (cGMP) synthesis in platelets. This lack of activity to release NO by neutrophils from patients during AMI was unrelated to a defect in the platelet cGMP-forming system; sodium nitroprusside, an exogenous NO donor, similarly increased cGMP levels in platelets from AMI patients and healthy donors. Neutrophils from patients during AMI and UA showed an increased production of NO and a marked expression of the iNOS isoform. However, NO released from these neutrophils showed a deficient functionality. These findings could have clin. implications because they show differences in thrombus growth in patients with UA vs. patients with AMI.
REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L77 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:287396 CAPLUS
DOCUMENT NUMBER: 135:221136
TITLE: Etomidate and thiopental inhibit **platelet** function in patients undergoing infrainguinal vascular surgery

AUTHOR(S): Gries, A.; Weis, S.; Herr, A.; Graf, B. M.; Seelos, R.; **Martin, E.**; Bohrer, H.
CORPORATE SOURCE: Department of Anesthesiology, University of Heidelberg, Heidelberg, Germany
SOURCE: Acta Anaesthesiologica Scandinavica (2001), 45(4), 449-457
CODEN: AANEAB; ISSN: 0001-5172
PUBLISHER: Munksgaard International Publishers Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Background: Postoperative platelet hyperaggregability following general anesthesia has been reported in patients undergoing major vascular surgery. In contrast, since anesthetic agents inhibited platelet function both in vitro and in vivo, an increased risk for postoperative bleedings due to prolonged platelet dysfunction has been discussed. Nevertheless, data describing platelet-affecting properties of induction agents such as etomidate and thiopental in patients undergoing major vascular surgery are lacking. Methods: Platelet function was determined at 0, 2, 20, and 200 μg/mL thiopental and at 0, 0.2, 2, 20 μg/mL etomidate in vitro in blood samples drawn from 16 patients suffering from severe occlusive arterial disease. In addition, 30 patients undergoing vascular surgery were investigated before (PRE) and after anesthesia induction (T0) either with etomidate (ETO group, n=16) or thiopental (THIO group, n=14), and 2 h after the beginning of surgery (T2). Platelet function was determined according to platelet aggregation, in vitro bleeding time, and flow cytometric measurements. Results: In vitro, P-selectin expression was inhibited by etomidate at 2 and 20 μg/mL (-28% and -38%, resp.) and also by thiopental at 200 μg/mL (-27%). In patients undergoing vascular surgery, anesthesia induction in the ETO group resulted in a 31% prolongation of the in vitro bleeding time and an inhibition of ADP- and collagen-induced platelet aggregation (-30% and -17%, resp.) and of P-selectin expression (-25%) at T0. In the THIO group, only ADP-induced platelet aggregation was affected (-16%). At T2, all parameters had reached PRE level again in both groups. Furthermore, in comparison with the THIO group, operation time was significantly prolonged and transfusion volume was significantly increased in the ETO group. In addition, platelet count and hematocrit significantly decreased at T2, whereas levels of tPA, PAI-1, fibrinogen and antithrombin III and partial thromboplastin time remained unchanged in both groups during the study period. Conclusions: In the present study, etomidate and, to a minor extent, thiopental offered significant platelet inhibitory properties. Anesthetic-induced platelet inhibition may lead to higher transfusion rates and prolonged operation times. Therefore, anesthetic-related platelet inhibitory properties should be considered when searching for the anesthetic agent of choice, especially in patients with compromised hemostasis and co-existing bleeding disorders.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L77 ANSWER 5 OF 25 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:167588 BIOSIS
DOCUMENT NUMBER: PREV200400161772
TITLE: High dose Recombinant activated factor VII in a pediatric patient with factor VIII deficiency and high titer inhibitor.
AUTHOR(S): Bryant, Paulette C. [Reprint Author]; **Carr, Marcus E.**; Martin, Erika J.; Sutton, Joanne F. [Reprint Author]
CORPORATE SOURCE: Department of Pediatric Hematology/Oncology, Naval Medical Center Portsmouth, Portsmouth, VA, USA

SOURCE: Blood, (November 16 2003) Vol. 102, No. 11, pp. 104b-105b. print.
Meeting Info.: 45th Annual Meeting of the American Society of Hematology. San Diego, CA, USA. December 06-09, 2003. American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 24 Mar 2004
Last Updated on STN: 24 Mar 2004

AB Introduction: Severe hemophilia A patients with high titer inhibitors to factor VIII who have failed immune modulation are at high risk for joint bleeds. Recombinant activated factor VII (rFVIIa) has been shown to be effective for acute bleeds. However the recommended dose of rFVIIa at 90 mcg/kg every 2 to 3 hrs does not provide consistent results. It has been previously suggested that this variation in response may be secondary to a higher clearance rate and shorter T1/2 particularly in patients <15 years, or a variation between individuals in their ability to generate thrombin on the activated **platelet** surface. (Hedner, 2001) This case demonstrates the use of high dose rFVIIa as an effective therapy for repeated joint bleeds in a pediatric patient that has failed all other available treatments. Case report: Patient is a 9 y/o AA male diagnosed with severe FVIII deficiency at birth. At 2 yrs of age, he developed a FVIII inhibitor of 20 Bethesda Units (BU). A challenge test at 4 yrs revealed an inhibitor level of 7.2 BU pre and 1.4 BU post infusion which rose to 30 BU at two weeks. Tolerance therapy included Recombinant factor VIII 25 units/kg/dose 3 days/week, followed by 50 units/kg/day and finally 100units/kg/day. Autoplex 75units/kg/dose qod was given during the 3 year trial of tolerance therapy. The patient continued to have spontaneous bleeds in knees, left shoulder, and right ankle 3-4x/month. He received rFVIIa 200 mcg/kg q 2hrs for acute bleeds and prednisone 1mg/kg qod which was tapered over a 3 month period to 0.1mg/kg/day without spontaneous bleeds. A left knee and right ankle radiosynovectomy was performed in 2001. Post synovectomy tolerance was attempted with Alphanate 200 units/kg/day with Autoplex 75 units/kg MWF, amicar and prednisone for breakthrough bleeds, but was unsuccessful. rFVIIa was restarted for joint bleeds at 200mcg/kg q 2 hrs and was also unsuccessful. In 2002, he suffered trauma, and received at home FEIBA 75 units/kg x4 doses in 24hours which resulted in a left common iliac clot. LMWH was given for 5 days, and prophylaxis was discontinued. Hematuria developed which required rFVIIa 200mcg/kg q 2hrs for 24hrs to control bleeding. A thrombin generation time was determined which revealed a partial response to rFVIIa 200mcg/kg. Based on these results, prophylaxis with rFVIIa was started at 300mcg/kg MWF with prednisone 0.1 mg/kg/day. Patient had no spontaneous bleeds for 4 months. In June 2003, prednisone was discontinued by his mother and the following month he suffered 4 joint bleeds. Prednisone was restarted at 2mg/kg/day X3days then tapered to 1mg/kg/day and rFVIIa 300 mcg/kg/day qd X7days then MWF with no further spontaneous bleeds. Thrombin generation time was repeated without significant change from the previous study. Conclusion: High dose rFVIIa with prednisone has been an effective treatment for our patient with high titer inhibitor to FVIII. Though thrombin generation was decreased compared to the test control, there was enough thrombin burst to control spontaneous bleeds. Steroids may have a role in decreasing these spontaneous bleeds. We feel that Thrombin generation time, **platelet** contractile force and clot elastic modulus may be helpful **markers** in those patients who do not respond well to recommended doses of rFVIIa.

L77 ANSWER 6 OF 25 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:358179 BIOSIS
DOCUMENT NUMBER: PREV200300358179
TITLE: **Platelet** Contractile Force and Clot Elastic Modulus as **Markers** of Thrombin Generation in a Patient with Severe Factor VII Deficiency Undergoing Treatment with Recombinant Factor VIIa.
AUTHOR(S): **Carr, Marcus E.** [Reprint Author]; Kuhn, Janice G.; Martin, Erika J.
CORPORATE SOURCE: Department of Internal Medicine, Medical College of Virginia of Virginia Commonwealth University, Richmond, VA, USA
SOURCE: Blood, (November 16 2002) Vol. 100, No. 11, pp. Abstract No. 3908. print.
Meeting Info.: 44th Annual Meeting of the American Society of Hematology. Philadelphia, PA, USA. December 06-10, 2002. American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Aug 2003
Last Updated on STN: 6 Aug 2003

AB Inherited Factor VII deficiency is a rare congenital bleeding disorder with an estimated incidence of 1/100,000 to 1/500,000 cases/population and a highly variable hemorrhagic predisposition. Hereditary Factor VII (FVII) deficiency has been treated with fresh frozen plasma or prothrombin complex concentrates that contain Factor VII. Recombinant Factor VIIa (rFVIIa) has been used successfully in the treatment of bleeding occurring in FVII congenital deficiencies; however, the underlying mechanism of action is not well understood. It may be related to the effect of rFVIIa binding to **platelets** and the subsequent local, **platelet** -mediated delivery of high concentrates of FVIIa to sites of vascular injury or to **platelet** activation. Studies suggest that the kinetics of rFVIIa are not dose-dependent and that bleeding diathesis in FVII deficiency poorly correlate to plasma Factor VII:C levels. An alternative laboratory **marker** would be of benefit to monitor clinical efficacy of rFVIIa in FVII deficient patients. Case Study: A forty-eight year old white female with severe FVII Deficiency has been treated with rFVIIa for the past three years. In 2000, she underwent a breast biospy with rFVIIa coverage. Concurrently, she had a right elbow bleed. She received nine doses of 18mcg/kg rFVIIa every 6-8 hours over three days. A peak Factor VII:C assay and PT were drawn after the first dose, and a trough level was obtained on day two. Results were 440%/<8.0 seconds and 27%/14.4, respectively. The elbow bleed resolved, and there was no untoward bleeding from the biopsy site. In 2002, the patient returned with a right elbow bleed. **Platelet** Contractile Force (PCF) and Clot Elastic Modulus (CEM) were measured before and after the initial infusion of 18 mcg/kg of rFVIIa. Batroxobin and recalcification were used as clotting agents in these assays. When clotted by this mechanism, the initial upswing in PCF and CEM serve as **markers** of thrombin generation. The thrombin generation time which was 11 minutes at baseline corrected to 8 minutes (normal range: 3-8 minutes) after rFVIIa. PCF and CEM normalized. Summary: RFVIIa corrected the deficient thrombin generation seen in this patient with inherited FVII deficiency during an acute joint bleed. As a consequence, **platelet** function was improved and clot structure was enhanced. Further studies are needed to evaluate the sustained effect of rFVIIa on FVII deficient

patients, with the promise of better evaluating the dosing regime of this product in such patients.

L77 ANSWER 7 OF 25 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:108346 BIOSIS
DOCUMENT NUMBER: PREV200300108346
TITLE: Effect of epsilon-Aminocaproic Acid and Aprotinin on **Platelet** Structure and Function in Patients Undergoing Cardiopulmonary Bypass Surgery.
AUTHOR(S): Greilich, Philip E. [Reprint Author]; Brouse, Chad F. [Reprint Author]; Beckham, Joseph [Reprint Author]; **Carr, Marcus E.** [Reprint Author]; Jessen, Michael E. [Reprint Author]
CORPORATE SOURCE: Department of Anesthesiology and Pain Management, University of Texas Southwestern - Dallas Veteran Affairs Medical Center, Dallas, TX, USA
SOURCE: Anesthesiology Abstracts of Scientific Papers Annual Meeting, (2002) No. 2002, pp. Abstract No. A-124. http://www.asa-abstracts.com. cd-rom.
Meeting Info.: 2002 Annual Meeting of the American Society of Anesthesiologists. Orlando, FL, USA. October 12-16, 2002. American Society of Anesthesiologists Inc.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 26 Feb 2003
Last Updated on STN: 26 Feb 2003

AB Introduction: The interaction of circulating blood with the non-endothelial surface of the bypass circuit leads to **platelet** activation and changes in **platelet** structure and function during and after CPB. Some investigators have suggested that antifibrinolytic therapy may attenuate these changes in **platelets** in addition to inhibiting plasmin activity and D-dimer formation. This study was designed to compare the ability of epsilon-aminocaproic acid (EACA) and aprotinin to prevent alterations in **platelet** structure and function in patients undergoing CPB. Methods: Following IRB approval, 86 patients scheduled for CPB surgery were randomized in a double-blind fashion to either high-dose EACA (100 mg/kg loading dose, 30 mg/kg/hr infusion rate, and 5 g in the pump prime) (n=28), aprotinin (2x106 KIU loading dose, 5x105 KIU/hr infusion rate, and 2x106 KIU in the pump prime) (n=28); or saline (n=28). Blood samples were collected at 4 time points before, during and after CPB. Structural **markers** of **platelet** activation (P-Selectin, PAC-1) and adhesive receptor expression (GPIb, GPIIb/IIIa) were measured using flow cytometry. Bleeding times, **platelet** contractile force and collagen-induced **platelet** aggregation were performed to measure **platelet** function. Data were analyzed using repeated measures ANOVA and Student's t-test ($p<0.05$ was considered significant). Results: P-Selectin, PAC-1, and bleeding times were significantly increased during and after CPB in all groups. With the exception of GPIIb/IIIa, all other measured structural and functional **markers** were significantly decreased during and after CPB in the saline group. Significant attenuation in the reduction of GPIb expression was observed only in the aprotinin group and reduction in **platelet** contractile force was significantly blunted only in the EACA group. In addition, significant decreases in D-dimer formation (during & after CPB) and blood loss were noted in both the EACA and aprotinin groups as compared to saline. Discussion: This study reveals that although similar in their capacity to mediate reductions in D-dimer levels, EACA and aprotinin differ in their ability to prevent alterations in some **markers** of **platelet**

structure (GP Ib) and function (contractile force). Preservation of GPIb expression by aprotinin and EACA's ability to blunt decreases in **platelet** contractile force supports the postulate that the effect of these drugs on **platelet** structure and function clearly differs. Factors that contribute to these differences could be related to both the intrinsic state of **platelet** activation and variations in the mechanisms of fibrinolytic inhibition of each drug. Further study is required to better characterize the mechanistic differences that exist.

L77 ANSWER 8 OF 25 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:225763 BIOSIS
DOCUMENT NUMBER: PREV200100225763
TITLE: Diabetes mellitus: A hypercoagulable state.
AUTHOR(S): **Carr, Marcus E.** [Reprint author]
CORPORATE SOURCE: Departments of Internal Medicine and Pathology, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA, 23298-0230, USA
mcarr@hsc.vcu.edu
SOURCE: Journal of Diabetes and its Complications, (January-February, 2001) Vol. 15, No. 1, pp. 44-54. print.
Meeting Info.: 2nd Annual International Motor City Diabetes Symposium. Detroit, Michigan, USA. October 29-30, 1999.
ISSN: 1056-8727.
DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Paper)
LANGUAGE: English
ENTRY DATE: Entered STN: 9 May 2001
Last Updated on STN: 19 Feb 2002

L77 ANSWER 9 OF 25 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1989:448108 BIOSIS
DOCUMENT NUMBER: PREV198988096380; BA88:96380
TITLE: HUMAN IMMUNODEFICIENCY VIRUS HIV INFECTION IN HEMOPHILIACS LONG-TERM PROGNOSTIC SIGNIFICANCE OF THE HIV SEROLOGIC PATTERN.
AUTHOR(S): RASKA K JR [Reprint author]; KIM H C; RASKA K III; **MARTIN E**; RASKOVA J; SAIDI P
CORPORATE SOURCE: DEP PATHOL, UNIV MED DENT NEW JERSEY, ROBERT WOOD JOHNSON MED SCH, 675 HOES LANE, PISCATAWAY, NJ 08854-5635, USA
SOURCE: Clinical and Experimental Immunology, (1989) Vol. 77, No. 1, pp. 1-6.
CODEN: CEXIAL. ISSN: 0009-9104.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 4 Oct 1989
Last Updated on STN: 4 Oct 1989

AB To identify **markers** of prognostic value in the course of HIV disease, immunologic parameters and profiles of HIV antibodies and antigen were studied in 60 haemophiliacs. The 43 HIV-seropositive subjects were followed prospectively over a 4 year period with a retrospective analysis as well as of their frozen plasma for HIV **markers.** This group had a significant decrease in number of helper/inducer T lymphocytes as compared with 17 HIV seronegative subjects. The degree of changes correlated with the stage of disease, with the most severe depletion of CD4 cells in those who developed AIDS. Counts of B cells and **platelets** were also lower in HIV-infected haemophiliacs. Ten out of 12 AIDS patients had undetectable antibodies to HIV p24 antigen; low levels of p24 antibody were also seen in six out of 15 subjects with lymphadenopathy (CDC stage III), but in only two out of 16 asymptomatic

subjects (CDC stage II). Sustained HIV p24 antigenaemia (> 30 pg/ml) was seen in 10 AIDS patients, in five subjects with lymphadenopathy and in two asymptomatic haemophiliacs. Initial HIV serologic profiles, obtained when all patients were asymptomatic, were highly predictive for progression of the HIV infection: the initial pattern of low anti-p24 antibody and positive p24 antigenaemia conferred the worst prognosis, with all patients in this group developing ARC or AIDS within 36 months, whereas an initial high level of anti p24 antigenaemia was associated with relatively the best prognosis. Of such subjects, 58% have remained clinically asymptomatic after 48 months of the study (P < 0.00001). The serologic profile of HIV antibody pattern and HIV antigen in haemophilic patients thus already provides important prognostic information at an early stage of HIV infection.

L77 ANSWER 10 OF 25 MEDLINE on STN
ACCESSION NUMBER: 2006033658 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16420568
TITLE: Thrombin generation time is a novel parameter for monitoring enoxaparin therapy in patients with end-stage renal disease.
AUTHOR: Brophy D F; **Martin E J**; Gehr T W B; Best A M; Paul K; **Carr M E Jr**
CORPORATE SOURCE: Department of Pharmacy Practice, Virginia Commonwealth University/Medical College of Virginia, Richmond, VA 23298, USA.. dbrophy@vcu.edu
CONTRACT NUMBER: 1R41 HL77964-01 (NHLBI)
M01 RR00065 (NCRR)
SOURCE: Journal of thrombosis and haemostasis : JTH, (2006 Feb) Vol. 4, No. 2, pp. 372-6.
Journal code: 101170508. ISSN: 1538-7933.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200604
ENTRY DATE: Entered STN: 20 Jan 2006
Last Updated on STN: 11 Apr 2006
Entered Medline: 10 Apr 2006

AB BACKGROUND: Patients with end-stage renal disease (ESRD) who receive enoxaparin are at increased risk for adverse bleeding episodes. This phenomenon appears to occur despite judicious monitoring of antifactor Xa (aFXa) activity. Better monitoring parameters are needed to quantify the anticoagulant effects of enoxaparin in the ESRD population. OBJECTIVES: The objective of this study was to determine the utility of using thrombin generation time (TGT), **platelet contractile force** (PCF) and **clot elastic modulus** (CEM) to monitor the degree of anticoagulation in ESRD subjects, and to compare these results to aFXa activity, the current gold-standard monitoring parameter. METHODS: Eight healthy volunteers without renal dysfunction and eight ESRD subjects were enrolled into this study. Subjects received a single dose of enoxaparin 1 mg kg(-1) subcutaneously, and blood samples were obtained for the determination of aFXa activity, TGT, PCF and CEM at baseline, 4, 8, and 12 h postdose. RESULTS: Baseline, 4, 8, and 12-h aFXa activity concentrations were not different between groups. However, the corresponding TGT at 8 and 12 h was significantly prolonged in the ESRD group (P = 0.04, and P = 0.008, respectively). The 4-h peak TGT trended toward significance (P = 0.06). There were no differences in PCF or CEM across time. CONCLUSIONS: These data suggest that the parameter aFXa activity is a poor predictor of the anticoagulant effect of enoxaparin in patients with ESRD. Thrombin generation time

appears to be more sensitive to the antithrombotic effects of enoxaparin in this population. Further large-scale trials are needed to corroborate these data.

L77 ANSWER 11 OF 25 MEDLINE on STN
ACCESSION NUMBER: 2004401573 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15304034
TITLE: Antifactor Xa activity correlates to thrombin generation time, **platelet contractile force** and **clot elastic modulus** following ex vivo enoxaparin exposure in patients with and without renal dysfunction.
AUTHOR: Brophy D F; **Martin E J**; Best A M; Gehr T W B; **Carr M E**
CORPORATE SOURCE: Department of Pharmacy, Virginia Commonwealth University, Medical College of Virginia Campus, Richmond, Virginia, USA.. dbrophy@bcu.edu
SOURCE: Journal of thrombosis and haemostasis : JTH, (2004 Aug) Vol. 2, No. 8, pp. 1299-304.
Journal code: 101170508. ISSN: 1538-7933.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200503
ENTRY DATE: Entered STN: 13 Aug 2004
Last Updated on STN: 8 Mar 2005
Entered Medline: 7 Mar 2005

AB Antifactor Xa activity is the gold standard monitoring parameter for low molecular weight heparin (LMWH) derivatives. It is frequently measured in high-risk populations, such as patients with renal dysfunction. Despite antifactor Xa monitoring, however, bleeding in renal dysfunction patients receiving LMWH remains a problem. This study determined the relationship between antifactor Xa activity and three novel coagulation monitoring parameters: thrombin generation time (TGT), **platelet contractile force** (PCF) and **clot elastic modulus** (CEM). This study also assessed the effect of renal dysfunction on these relationships. This was an ex vivo pharmacodynamic study of the relationship between antifactor Xa activity and TGT, PCF and CEM in subjects both with and without renal dysfunction. Thirty subjects completed this study (10 controls, 10 chronic kidney disease subjects, and 10 end-stage renal disease subjects receiving hemodialysis). Blood samples obtained from participants were spiked with increasing enoxaparin concentrations (0.25, 0.5, 1.0 and 3.0 IU mL(-1)). Samples were analyzed for TGT, PCF and CEM. The relationship between antifactor Xa activity and TGT, PCF and CEM was determined by Pearson's correlation. The effect of renal dysfunction on the relationship between antifactor Xa activity and TGT, PCF and CEM was determined by analysis of covariance. There is strong correlation between antifactor Xa activity and TGT, CEM and PCF. The presence of renal dysfunction significantly prolongs the TGT, and decreases the CEM relative to controls. These results suggest that patients with renal dysfunction have a greater pharmacodynamic response to LMWH, independent of the pharmacokinetics of LMWH.

L77 ANSWER 12 OF 25 MEDLINE on STN
ACCESSION NUMBER: 2003200240 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12719776
TITLE: Effects of recombinant factor VIIa on **platelet** function and clot structure in blood with deficient

prothrombin conversion.
AUTHOR: **Carr Marcus E Jr**; **Martin Erika J**; Kuhn Jan G; Seremetis Stephanie V
CORPORATE SOURCE: Coagulation Special Studies Laboratory, Department of Medicine, Virginia Commonwealth University, Richmond, Virginia 23298-0230, USA.. mcarr@hsc.vcu.edu
SOURCE: Thrombosis and haemostasis, (2003 May) Vol. 89, No. 5, pp. 803-11.
Journal code: 7608063. ISSN: 0340-6245.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200402
ENTRY DATE: Entered STN: 30 Apr 2003
Last Updated on STN: 21 Feb 2004
Entered Medline: 20 Feb 2004

AB While recombinant factor VIIa (rFVIIa) shows promise as a broad-spectrum hemostatic agent, questions remain regarding the most appropriate dose and the best way to monitor its effects. In this study we tested the sensitivity of a thrombin dependent **platelet** assay, **platelet contractile force**, to the effects of rFVIIa in normal, factor-deficient, and inhibitor-containing blood samples. Dose dependent effects of rFVIIa on **platelet contractile force** (PCF) and **clot elastic modulus** (CEM) were measured in all blood samples. rFVIIa minimally affected PCF and CEM in normal blood clotted with thrombin or batroxobin. While rFVIIa minimally altered PCF and CEM in factor VIII (FVIII) deficient blood clotted with thrombin, rFVIIa increased PCF and CEM and shortened the lag phase in a dose dependent manner in batroxobin-induced clots. The effects of rFVIIa in factor IX (FIX) deficient blood mirrored the effects seen in FVIII deficient samples. Whether clotted with thrombin or batroxobin, baseline PCF and CEM were abnormally low in FVIII deficient samples containing FVIII inhibitors. In such samples, rFVIIa caused dose dependent improvement of PCF, CEM, and lag phases. In one patient with a spontaneous inhibitor, rFVIIa caused dose dependent increases in PCF and CEM in blood clotted with either enzyme. rFVIIa corrects the deficient thrombin generation seen in FVIII and FIX deficiency, and in blood containing FVIII inhibitors. As a consequence, **platelet** function is improved and clot structure is enhanced. **Platelet contractile force** and **clot elastic modulus** measurements are sensitive to the dose dependent effects of rFVIIa.

L77 ANSWER 13 OF 25 MEDLINE on STN
ACCESSION NUMBER: 2003373536 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12871496
TITLE: Batroxobin-induced clots exhibit delayed and reduced **platelet contractile force** in some patients with clotting factor deficiencies.
AUTHOR: **Carr M E Jr**; Carr S L; Tildon T; Fisher L M C A; **Martin E J**
CORPORATE SOURCE: Coagulation Special Studies Laboratory, Medical College of Virginia, VA, USA.. mcarr@hsc.vcu.edu
SOURCE: Journal of thrombosis and haemostasis : JTH, (2003 Feb) Vol. 1, No. 2, pp. 243-9.
Journal code: 101170508. ISSN: 1538-7933.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 200310
ENTRY DATE: Entered STN: 12 Aug 2003
Last Updated on STN: 2 Oct 2003
Entered Medline: 1 Oct 2003

AB Thrombin causes **platelet** activation via multiple pathways, and deficient thrombin generation reduces **platelet contractile force** (PCF) during clot retraction. We hypothesized that PCF in blood samples from clotting factor-deficient patients would be diminished due to delayed or deficient thrombin generation. Blood samples from patients with fibrinogen, and factor V, VII, VIII, IX, X, XI and XIII deficiencies were compared to samples from normal controls. PCF in patient blood clotted with thrombin (1 NIH UmL(-1)) was compared to PCF in clots formed with batroxobin (0.25 micro g mL(-1)). PCF in the former should be normal, but PCF in the latter is dependent on thrombin generation within the sample and might be deficient. In factor VII-(n = 2, P < 0.05), factor VIII-(n = 6, P < 0.005) and factor XI-(n = 2, P < 0.05) deficient **platelet**-rich plasmas, PCF in batroxobin-induced clots was significantly lower than in thrombin-induced clots. In factor IX deficiency (n = 2), one patient had a dramatic reduction in PCF while a second patient had increased PCF. PCF was insignificantly (P = 0.346) reduced in two patients with factor X deficiency, and was normal in one patient with factor V deficiency. The factor X result is consistent with work in model systems, which indicates that as little as 1-3% factor X activity is sufficient to restore thrombin generation to normal. The factor V result probably indicates that the deficiency is incomplete. PCF in thrombin-induced clots was normal in all of these patients. Low fibrinogen and factor XIII deficiency reduced PCF in both thrombin- and batroxobin-induced clots. These results indicate that PCF is reduced, probably due to delayed thrombin generation, in some factor-deficient **platelet**-rich plasma samples.

L77 ANSWER 14 OF 25 MEDLINE on STN
ACCESSION NUMBER: 2003484174 MEDLINE
DOCUMENT NUMBER: PubMed ID: 14515016
TITLE: Effect of non-heparin thrombin antagonists on thrombin generation, **platelet** function, and clot structure in whole blood.
AUTHOR: **Carr Marcus E Jr**; Angchaisuksiri Pantep; Carr Sheryl L; **Martin Erika J**
CORPORATE SOURCE: Department of Medicine, Medical College of Virginia, Virginia Commonwealth University, and Richmond Veterans Administration Medical Center, Richmond, VA 23298-0230, USA.. mcarr@hsc.vcu.edu
SOURCE: Cell biochemistry and biophysics, (2003) Vol. 39, No. 2, pp. 89-99.
Journal code: 9701934. ISSN: 1085-9195.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200405
ENTRY DATE: Entered STN: 18 Oct 2003
Last Updated on STN: 27 May 2004
Entered Medline: 26 May 2004

AB **Platelet contractile force** (PCF), which is absent in blood obtained during cardiopulmonary bypass, significantly recovers after protamine sulfate administration. In vitro studies reveal this effect to be primarily caused by heparin. Because many of heparin's effects are mediated by suppression of thrombin generation and activity,

this study assessed the influence of thrombin inhibition on PCF. The effects of natural and synthetic antithrombins were measured. Clots were formed by the addition of batroxobin (0.21 microg/mL) to whole blood (**platelet** count 200,000/microL). Force development was measured from the moment of batroxobin addition. After 1200 s of clotting, purified antithrombin III (22 microM) reduced PCF by 74%. Thrombomodulin (0.014 microM) reduced PCF by 60%. At 0.040 microM, PCF was reduced by 82% (6.5-1.2 Kdynes). Hirudin decreased PCF in a dose-dependent fashion, with complete suppression at concentrations > or = 0.30 microM. At concentrations between 0.04 and 0.29 microM, Lepirudin (Refludan, a recombinant therapeutic hirudin) produced dose-dependent delay and suppression of PCF. Above 0.29 microM Lepirudin, PCF was totally suppressed. At 1.60 microM, bivalirudin (a synthetic, 20 amino acid peptide) delayed and reduced PCF by 50%. At 6.40 micro;M, PCF was completely suppressed. Although 20 microM of P-PACK II (d-Phenylalanyl-L-Phenylalanylarginine- chloro-methyl ketone 2 HCl) had little effect, 40 microM delayed onset of force development from 300 to 600 s and reduced PCF at 1200 s from 5.2 to 3.3 Kdynes. At 120 microM, force development was totally suppressed. Four micromol Thromstop (BNas-Gly-(pAM)Phe-Pip) delayed force development by greater than 800 s and PCF at 1200 s was reduced by 70%. At 0.20 microM, Argatroban (a synthetic polypeptide direct thrombin antagonist) delayed onset of PCF from 300 to 540 s and decreased PCF by 40%. At a concentration of 0.40 microM and above, Argatroban totally suppressed PCF. These results indicate that some of the antiplatelet effects of heparin are the result of thrombin inhibition and that low-level thrombin generation is essential for clot retraction. The sensitivity of PCF to the presence of thrombin may permit monitoring of antithrombin agents via this assay.

L77 ANSWER 15 OF 25 MEDLINE on STN
ACCESSION NUMBER: 2003182307 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12663942
TITLE: Development of **platelet contractile force** as a research and clinical measure of **platelet** function.
AUTHOR: **Carr Marcus E Jr**
CORPORATE SOURCE: Department of Medicine, Medical Colllege of Virginia, Virginia Commonwealth University and Richmond Veterans Affairs Medical Center, 23298, USA.. mcarr@hsc.vcu.edu
SOURCE: Cell biochemistry and biophysics, (2003) Vol. 38, No. 1, pp. 55-78. Ref: 77
Journal code: 9701934. ISSN: 1085-9195.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200311
ENTRY DATE: Entered STN: 19 Apr 2003
Last Updated on STN: 17 Dec 2003
Entered Medline: 20 Nov 2003

AB This article reviews work performed at the Medical College of Virginia of Virginia Commonwealth University during the development of a whole-blood assay of **platelet** function. The new assay is capable of assessing **platelet** function during clotting and thus allows measurement of the contribution of **platelets** to thrombin generation. Because **platelets** are monitored in the presence of thrombin, the test gages **platelets** under conditions of maximal activation. Three parameters are simultaneously assessed on one 700 microL sample of citrated whole blood. **Platelet**

contractile force (PCF), the **force** produced by **platelets** during clot retraction, is directly measured as a function of time. This parameter is sensitive to **platelet** number, **platelet** metabolic status, glycoprotein IIb/IIIa status, and the presence of antithrombin activities. **Clot elastic modulus** (CEM), also measured as a function of time, is sensitive to fibrinogen concentration, **platelet** concentration, the rate of thrombin generation, the flexibility of red cells, and the production of force by **platelets.** The third parameter, the thrombin generation time (TGT) is determined from the PCF kinetics curve. Because PCF is absolutely thrombin dependent (no thrombin-no force), the initial upswing in PCF occurs at the moment of thrombin production. TGT is sensitive to clotting factor deficiencies, clotting factor inhibitors, and the presence of antithrombins, all of which prolong the TGT and are known to be hemophilic states. Treatment of hemophilic states with hemostatic agents shortens the TGT toward normal. TGT has been demonstrated to be shorter and PCF to be increased in coronary artery disease, diabetes mellitus, and several other thrombophilic states. Treatment of thrombophilic states with a variety of heparin and nonheparin anticoagulants prolongs the TGT toward normal. The combination of PCF, CEM, and TGT measured on the same sample may allow rapid assessment of global hemostasis and the response to a variety of procoagulant and anticoagulant medications.

L77 ANSWER 16 OF 25 MEDLINE on STN
ACCESSION NUMBER: 2002497806 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12358876
TITLE: **Platelet contractile force** (PCF) and **clot elastic modulus** (CEM) are elevated in diabetic patients with chest pain.
AUTHOR: **Carr M E**; Krishnaswami A; **Martin E J**
CORPORATE SOURCE: Departments of Internal Medicine and Pathology, McGuire VA Medical Center and Virgina Commonwealth University, Richmond, VA 23298-0230, USA.. mcarr@hsc.vcu.edu
SOURCE: Diabetic medicine : a journal of the British Diabetic Association, (2002 Oct) Vol. 19, No. 10, pp. 862-6. Journal code: 8500858. ISSN: 0742-3071.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200301
ENTRY DATE: Entered STN: 3 Oct 2002
Last Updated on STN: 24 Jan 2003
Entered Medline: 23 Jan 2003

AB AIMS: **Platelet** function and clot structure may be altered in diabetes. We have noted increased **platelet contractile force** (PCF) and **clot elastic modulus** (CEM) in patients presenting to the emergency department with chest pain. Twenty-six of the chest pain patients were diabetic. Here, we compare the PCF, CEM and **platelet** aggregation in diabetic chest pain patients, non-diabetic patients with chest pain and asymptomatic controls. PATIENTS AND METHODS: PCF, CEM and collagen whole blood aggregations were measured in 100 chest pain patients and 25 asymptomatic controls. RESULTS: **Platelet** concentrations for diabetic patients, non-diabetic patients and controls were identical. PCF was significantly ($P < 0.05$) elevated in diabetic chest pain patients (9.42 +/- 0.59 kdynes) vs. controls (7.40 +/- 0.32 kdynes). CEM in diabetic patients (29.96 +/- 2.19 kdynes/cm2) was significantly elevated relative to that in non-diabetic chest pain patients (25.22 +/- 0.84 kdynes/cm2) and normal

controls (23.18 +/- 0.74 kdynes/cm2). Collagen-induced whole blood aggregation was decreased (P < 0.05) in diabetic chest pain patients vs. controls. PCF values (10.23 +/- 0.76 kdynes) in diabetic patients with haemoglobin A1c > 7% were higher than in any other group. CONCLUSION: PCF and CEM are elevated in diabetic chest pain patients. The significance of these laboratory findings awaits additional clinical studies.

L77 ANSWER 17 OF 25 MEDLINE on STN
ACCESSION NUMBER: 2002348801 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12091054
TITLE: Reductions in **platelet contractile force** correlate with duration of cardiopulmonary bypass and blood loss in patients undergoing cardiac surgery.
AUTHOR: Greilich Philip E; Brouse Chad F; Beckham Joseph; Jessen Michael E; **Martin Erika J**; **Carr Marcus E**
CORPORATE SOURCE: Department of Anesthesiology and Pain Management, University of Texas Southwestern Medical Center-Dallas and Veterans Affairs North Texas Health Care System, Dallas, TX 75216, USA.. philip.greilich@email.swmed.edu
SOURCE: Thrombosis research, (2002 Mar 15) Vol. 105, No. 6, pp. 523-9.
Journal code: 0326377. ISSN: 0049-3848.
PUB. COUNTRY: United States
DOCUMENT TYPE: (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 2 Jul 2002
Last Updated on STN: 5 Mar 2003
Entered Medline: 4 Mar 2003

AB Blood loss secondary to **platelet** dysfunction is known to be increased when the duration of cardiopulmonary bypass (CPB) is prolonged. The ability to correlate alterations in **platelet** function with the duration of bypass and early postoperative blood loss, however, has remained elusive. **Platelet contractile force**, a novel measure of **platelet**-mediated clot retraction, is known to be reduced following cardiac surgery and blockade of **platelet** adhesion receptors. The aim of this study was to determine if alterations in **platelet contractile force** (measured using whole blood) correlated with the duration of CPB and early postoperative blood loss. Thirty patients were entered into a study designed to measure **platelet** function before, during, and after CPB. **Platelet** aggregometry and surface expression of CD42b and CD61 were also measured (using whole blood) in a subset of subjects (n=10) to further characterize the intrinsic structural and functional defects induced by CPB. Reductions in **platelet contractile force** had a significant correlation with duration of CPB (r=0.564; P=0.002) and early blood loss (r=0.545; P=0.003). Although decreases in **platelet contractile force** and aggregation both correlated with CPB time in the smaller subset of patients tested, only **platelet contractile force** correlated with decreases in CD42b, CD61 and blood loss. The results of this study suggest that prolongation of CPB is related to increasing degrees of **platelet** dysfunction and that reductions in **platelet contractile force** are related to decreases in **platelet** adhesion receptors and early postoperative blood loss.

L77 ANSWER 18 OF 25 MEDLINE on STN

ACCESSION NUMBER: 2002306648 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11943932
TITLE: Delayed, reduced or inhibited thrombin production reduces **platelet contractile force** and results in weaker clot formation.
AUTHOR: **Carr M E Jr**; **Martin E J**; Carr S L
CORPORATE SOURCE: Special Coagulation Laboratory, Department of Internal Medicine, Medical College of Virginia, Richmond, Virginia, USA.. mcarr@hsc.vcu.edu
SOURCE: Blood coagulation & fibrinolysis : an international journal in haemostasis and thrombosis, (2002 Apr) Vol. 13, No. 3, pp. 193-7.
Journal code: 9102551. ISSN: 0957-5235.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200210
ENTRY DATE: Entered STN: 11 Jun 2002
Last Updated on STN: 8 Oct 2002
Entered Medline: 4 Oct 2002

AB Clot retraction is a thrombin-dependent, **platelet**-mediated contraction of the cellular clot mass. In this study, the effects of delayed, deficient and inhibited thrombin generation on the development of **platelet contractile force** (PCF) and **clot elastic modulus** (CEM) were measured.
When normal citrated whole blood is clotted by the addition of exogenous thrombin (1 U/ml) and calcium (10 mmol/l), PCF and CEM start to develop within the first minute and begin to level off by 1200 s. If identical samples are clotted with batroxobin (0.21 microg/ml) and calcium (10 mmol/l), both PCF and CEM development are delayed approximately 5 min. After 1200 s of clotting, however, values in the batroxobin system approach those seen with exogenous thrombin. If the added calcium concentration is held constant at 10 mmol/l, increasing the exogenous thrombin concentration from 0 to 0.5 U/ml results in increased PCF and CEM values. Above 0.5 U thrombin, the effect plateaus. At exogenous calcium of 10 mmol/l, increasing batroxobin concentrations (0-0.210 microg/ml) caused a 75% increase in PCF and a 55% increase in CEM. The increase in CEM reached a plateau above 0.05 microg batroxobin/ml. The effects of varying calcium concentrations were evaluated at constant batroxobin (0.21 microg/ml) and thrombin (1 U/ml) concentrations. With thrombin, PCF and CEM increased by > 700% as CaCl2 increased from 0 to 5 mmol/l. Above 5 mmol/l, no additional increases occurred. With batroxobin, PCF did not develop at CaCl2 concentrations < or = 2.5 mmol/l. Above 2.5 mmol/l CaCl2, PCF values increased and at 10 mmol/l CaCl2 were equal to those seen with thrombin. CEM in batroxobin-mediated clots peaked at 10 mmol/l CaCl2 but were 40% less than the values found in thrombin-mediated clots. When the thrombin inhibitor P-PACK was added to the batroxobin system, dose-dependent decreases in PCF and CEM were noted. At 120 micromol/l, P-PACK totally suppressed PCF. PCF in blood from a factor VIII-deficient patient varied significantly when clotted with batroxobin versus thrombin. PCF development in factor VIII-deficient blood was normal with thrombin but is delayed and depressed with batroxobin. PCF values in factor VIII-deficient blood did not reach the thrombin value after 1200 s of clotting, and CEM was significantly less. These results confirm that PCF development is thrombin dependent and that delay or reduction of PCF development results in structurally weaker clots.

L77 ANSWER 19 OF 25 MEDLINE on STN
ACCESSION NUMBER: 2003145540 MEDLINE

DOCUMENT NUMBER: PubMed ID: 12590953
TITLE: Aprotinin counteracts heparin-induced inhibition of **platelet contractile force.**
AUTHOR: **Carr Marcus E Jr**; Carr Sheryl L; Roa Veronica; McCardell Kathleen A; Greilich Philip E
CORPORATE SOURCE: Department of Internal Medicine, Medical College of Virginia, Virginia Commonwealth University, Richmond, 23298, USA.. mcarr@hsc.vcu.edu
SOURCE: Thrombosis research, (2002 Nov 1) Vol. 108, No. 2-3, pp. 161-8.
Journal code: 0326377. ISSN: 0049-3848.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200311
ENTRY DATE: Entered STN: 31 Mar 2003
Last Updated on STN: 17 Dec 2003
Entered Medline: 28 Nov 2003

AB BACKGROUND: Aprotinin interferes with heparin binding to **platelets** and decreases blood loss during cardiopulmonary bypass (CPB). Heparin abolishes **platelet** force during CPB, and the extent of **platelet** force recovery after protamine administration appears to correlate with blood loss. This study assessed the effect of aprotinin on heparin suppression of **platelet** force. METHODS: **Platelet** force was measured using the Hemodyne Hemostasis Analyzer. Clots were formed from **platelet**-rich plasma (PRP) by the addition of batroxobin and 10 mM CaCl(2). Clotting conditions included pH 7.4, ionic strength 0.15 M, fibrinogen level 1 mg/ml and 75,000 **platelets**/microl. RESULTS: After 1200 s of clotting, force was reduced from 7110+/-1190 to 450+/-450 dyn by 0.2 U/ml of heparin. **Platelet** force in aprotinin [20 microg/ml (140 KIU/ml)] containing PRP was not suppressed by heparin addition (7480+/-2410 dyn). Aprotinin [40 microg/ml (280 KIU/ml)] addition to previously heparinized plasma counteracted heparin force suppression. Aprotinin (40 microg/ml) increased **platelet** force from 5630 to 11,138+/-562 in PRP devoid of heparin. Aprotinin did not affect thrombin activity, fibrin structure, **platelet** aggregation or secretion. CONCLUSIONS: Aprotinin counteracts heparin suppression of **platelet** force and enhances **platelet** force in the absence of heparin. Aprotinin-heparin-**platelet** interactions may help explain aprotinin's ability to reduce blood loss during CPB.

L77 ANSWER 20 OF 25 MEDLINE on STN
ACCESSION NUMBER: 2001611457 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11686328
TITLE: Alterations of **platelet** aggregation kinetics with ultraviolet laser emission: the "stunned **platelet** " phenomenon.
AUTHOR: Topaz O; Minisi A J; Bernardo N L; McPherson R A; **Martin E**; Carr S L; **Carr M E Jr**
CORPORATE SOURCE: Division of Cardiology, McGuire VA Medical Center, Medical College of Virginia Hospitals, Virginia Commonwealth University, Richmond 23249, USA.
SOURCE: Thrombosis and haemostasis, (2001 Oct) Vol. 86, No. 4, pp. 1087-93.
Journal code: 7608063. ISSN: 0340-6245.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 5 Nov 2001
Last Updated on STN: 3 May 2002
Entered Medline: 2 May 2002

AB **Platelets**, a major constituent of thrombus, play a crucial role in the pathogenesis of acute ischemic coronary syndromes. The effect of ultraviolet laser emission on **platelets** within thrombi is unknown. The effects of increasing levels of laser energy on **platelets** in whole blood were investigated. Blood samples were obtained by aseptic venipuncture and anticoagulated with 3.8% sodium citrate. Samples were exposed to increased levels (0, 30, 45, 60 mJ/mm2; 25 Hz) of ultraviolet excimer laser fluence (308 nm wave-length) and then tested for ADP and collagen induced **platelet** aggregation, **platelet** concentration, and for **platelet contractile force** (PCF) development. Scanning electron microscopy was used to detect laser induced morphologic changes of **platelets** and by flow cytometric analysis to detect changes in expression of **platelet** surface antigens p-selectin (CD 62) and glycoprotein IIb/IIIa (CD 43). Exposure to excimer laser energy produced dose dependent suppression of **platelet** aggregation and force development ("stunned **platelets**"). ADP aggregation decreased from 8.0+/-1.1 Ohms (mean+/-SEM) to 3.7+/-0.8 Ohms (p<0.001) to 2.7+/-0.6 Ohms (p <0.001) and to 1.8+/-0.5 Ohms (p <0.001) as the laser energy increased from 0 to 30 to 45 to 60 mJ/mm2, respectively. Collagen induced aggregation decreased from 21.4+/-1.4 Ohms to 15.7+/-1.2 Ohms (p <0.001) to 11.7+/-1.1 Ohms (p <0.001) and to 9.9+/-1.0 Ohms (p <0.001), in response to the same incremental range of laser energy. **Platelet contractile forces** declined from 34,500+/-3700 to 27.800+/-2700 dynes as laser energy increased from 0 to 60 mJ/mm2 (p <0.03). **Platelet** concentration did not change with increasing laser energy. The expression of **platelet** surface antigen p-selectin (CD 62) remained stable through increasing levels of laser energy exposures while the percentage of CD 43 positive **platelets** significantly increased with exposure to laser energy, yet the level of expression did not exceed 0.5% of cells. Thus, aggregation kinetics are altered in **platelets** exposed to ultraviolet laser energy as manifested by decreased **platelet** aggregation and reduction in **platelet** force development capability. The response is dose dependent and most pronounced at higher energy levels such as 60 mJ/mm2.

L77 ANSWER 21 OF 25 MEDLINE on STN
ACCESSION NUMBER: 1999166816 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10069286
TITLE: Near-site monitoring of the antiplatelet drug abciximab using the Hemodyne analyzer and modified thrombelastograph.
AUTHOR: Greilich P E; Alving B M; Longnecker D; **Carr M E Jr** ; Whitten C W; Chang A S; Reid T J
CORPORATE SOURCE: Department of Anesthesiology and Pain Management, University of Texas Southwestern Medical Center-Dallas, USA.
SOURCE: Journal of cardiothoracic and vascular anesthesia, (1999 Feb) Vol. 13, No. 1, pp. 58-64.
Journal code: 9110208. ISSN: 1053-0770.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199904
ENTRY DATE: Entered STN: 4 May 1999

Last Updated on STN: 4 May 1999
Entered Medline: 21 Apr 1999

AB OBJECTIVE: This investigation examines the hypothesis that the antiplatelet effect of abciximab and its reversal can be monitored using the Hemodyne (Hemodyne, Inc, Midlothian, VA) analyzer and modified Thrombelastograph (Haemoscope, Skokie, IL). DESIGN: In vitro dose-response and reversal study. SETTING: Anesthesia Research (Dallas, TX) and Special Studies Coagulation Laboratories (Washington, DC). PARTICIPANTS: Nine healthy volunteers. INTERVENTIONS: The addition of increasing concentrations of abciximab, 0 to 10 microg/mL, and purified fibrinogen, 50 to 400 mg/dL. The reversal of abciximab, 4 microg/mL, with the addition of fresh **platelet**-rich plasma (PRP) sufficient to increase the **platelet** concentration by approximately 10%. MEASUREMENTS AND MAIN RESULTS: **Platelet** aggregation and **platelet contractile force** using the Hemodyne analyzer were used as **platelet**-specific measurements. The Thrombelastograph maximum amplitude (MA) for **platelets** (MA(PLT)) was calculated by subtracting the MA from a **platelet**-poor plasma (PPP) sample (MA(ppp)) determined in one thromboelastography well from that of whole-blood MA (MA(WB)) run simultaneously in the second thromboelastography well. The addition of abciximab, 0 to 10 microg/mL, resulted in significant concentration-dependent reductions in **platelet** aggregation ($p < 0.001$), **platelet contractile force** ($p < 0.001$), and MA(PLT) ($p < 0.001$). **Platelet contractile force** ($p < 0.03$) and MA(PLT) ($p < 0.05$) were significantly more responsive than MA(WB) to the effect of abciximab, 4 microg/mL, and its reversal with the addition of fresh PRP. Purified fibrinogen concentration directly correlated with thromboelastography MA ($r(s) = 0.97$; $p < 0.001$), yet had no effect on **platelet contractile force.** The addition of abciximab had no measurable influence on the MA(ppp). CONCLUSION: This in vitro study suggests that the Hemodyne analyzer and modified Thrombelastograph might be clinically useful methods to monitor the **platelet** inhibitory effects of agents such as abciximab.

L77 ANSWER 22 OF 25 MEDLINE on STN
ACCESSION NUMBER: 95315465 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7795157
TITLE: Fibrin structure and concentration alter **clot elastic modulus** but do not alter **platelet** mediated force development.
AUTHOR: **Carr M E Jr**; Carr S L
CORPORATE SOURCE: Department of Medicine, Medical of Virginia, Richmond, USA.
SOURCE: Blood coagulation & fibrinolysis : an international journal in haemostasis and thrombosis, (1995 Feb) Vol. 6, No. 1, pp. 79-86.
Journal code: 9102551. ISSN: 0957-5235.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199507
ENTRY DATE: Entered STN: 17 Aug 1995
Last Updated on STN: 3 Feb 1997
Entered Medline: 31 Jul 1995

AB During clot retraction, **platelets** interact with fibrin resulting in marked reduction of clot volume. Altered fibrin structure has been reported to affect clot retraction as measured by serum expression. This study was performed to test whether such altered retraction was the result of increased resistance to network collapse or due to decreased force

development by **platelets.** Altered fibrin structure was documented as variation of fibre mass/length ratios (mu) and shifts in **clot elastic modulus.** The force developed by **platelets** during clotting was measured directly. Increasing the fibrinogen concentration led to thinner fibre formation (decreased mu), and a linear increase in gel elastic modulus. Over a fibrinogen concentration range of 100 to 400 mg/dl, force development was minimally affected. Force development and **clot elastic modulus** increased in a linear fashion with increasing **platelet** concentration. Increasing the calcium concentration from 5 to 20 mM caused a 160% increase in fibrin fibre size (mu), and a 52% decline in clot modulus. Force developed at 1200 s declined by 17%. At 15 mg/ml, dextran and hydroxyethyl starch (HES) also increased mu, and decreased clot modulus; however, both agents markedly reduced force development. Increasing ionic strength or the addition of IgG decreased mu and increased gel elastic modulus. Force development increased modestly with increased ionic strength, did not change with addition of IgG in saline and declined with addition of IgG in maltose. This study indicates that force development is primarily dependent on **platelet** function while clot modulus depends on both fibrin structure and **platelet** function.(ABSTRACT TRUNCATED AT 250 WORDS)

L77 ANSWER 23 OF 25 MEDLINE on STN
ACCESSION NUMBER: 94213068 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8160823
TITLE: Abnormal clot retraction, altered fibrin structure, and normal **platelet** function in multiple myeloma.
AUTHOR: **Carr M E Jr**; Zekert S L
CORPORATE SOURCE: Department of Medicine, Medical College of Virginia, Richmond.
SOURCE: The American journal of physiology, (1994 Mar) Vol. 266, No. 3 Pt 2, pp. H1195-201.
Journal code: 0370511. ISSN: 0002-9513.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199405
ENTRY DATE: Entered STN: 26 May 1994
Last Updated on STN: 29 Jan 1999
Entered Medline: 19 May 1994

AB Clot retraction, measured by serum expression, is absent in some cases of multiple myeloma. Decreased clot retraction has been attributed to **platelet** dysfunction. A new instrument allows simultaneous measurement of **platelet**-mediated force development during clot retraction and of **clot elastic modulus.** We report 10 patients with immunoglobulin (Ig) G myeloma in whom the abnormalities of fibrin structure were quantitatively defined and **platelet**-fibrin interactions were assessed. Fiber mass-to-length ratios were calculated from gel turbidity. **Platelet** force development and clot elastic modula were measured in **platelet** -rich plasma gels. Fiber mass-to-length ratios for IgG myeloma patients were smaller (means +/- SE) (0.98 +/- 0.19 x 10(13) Da/cm) than for normal controls (1.36 +/- 0.06 x 10(13) Da/cm), indicating thinner fiber formation. Elastic modula of myeloma clots (51,013 +/- 14,660 dyn/cm2) were strikingly larger than modula for normal controls (23,355 +/- 1,887 dyn/cm2), indicating that such clots are mechanically less flexible. **Platelet** force development 1,200 s after thrombin addition was not diminished in myeloma patients (8,315 +/- 1,155 dyn) vs. controls (6,906

+/- 606 dyn). Abnormal clot retraction in myeloma appears to be primarily due to altered clot structure rather than **platelet** dysfunction.

L77 ANSWER 24 OF 25 MEDLINE on STN
ACCESSION NUMBER: 95133052 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7831681
TITLE: At high heparin concentrations, protamine concentrations which reverse heparin anticoagulant effects are insufficient to reverse heparin anti-**platelet** effects.
AUTHOR: **Carr M E Jr**; Carr S L
CORPORATE SOURCE: Department of Internal Medicine, Medical College of Virginia, Richmond.
SOURCE: Thrombosis research, (1994 Sep 15) Vol. 75, No. 6, pp. 617-30.
Journal code: 0326377. ISSN: 0049-3848.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199502
ENTRY DATE: Entered STN: 7 Mar 1995
Last Updated on STN: 3 Feb 1997
Entered Medline: 17 Feb 1995

AB Combined effects of heparin and protamine on plasma clot structure and **platelet** function were studied. Anticoagulant effects were monitored as changes in aPTT. Clot structure was defined in terms of fibrin fiber mass/length ratio (mu) and **clot elastic modulus** (EM). **Platelet** function was studied utilizing **platelet** aggregation and **platelet** force development (PFD) measurements. Heparin (1 U/ml) prolonged the aPTT from 30 to > 300 seconds, reduced PFD from 5,100 to 0 dynes, decreased mu (in batroxobin-induced gels) from 1.36 to 1.08 x 10(13) daltons/cm and decreased clot EM from 9,600 to 2000 dynes/cm2. Varying amounts of protamine reversed these effects: 16 micrograms/ml normalized the aPTT, 20 micrograms/ml normalized PFD, 32 micrograms/ml corrected mu, and 20 micrograms/ml returned EM to baseline. At high heparin concentrations (4 U/ml), protamine concentrations which corrected anticoagulant effects were inadequate to reverse antiplatelet effects. A protamine concentration of 40 micrograms/ml normalized the aPTT and mu, but 140 micrograms/ml of protamine was required to reverse heparin suppression of force development and **clot elastic modulus.** Excess protamine inhibited clotting and **platelet** function. In plasma containing 1 u heparin/ml, 140 micrograms protamine/ml reduced PFD by 83%, prolonged the aPTT by 63%, and reduced clot EM by 75%. In heparin free plasma, > 75 micrograms protamine/ml prolonged the aPTT. Thus, **platelet** function and clot structure are sensitive to protamine during heparin neutralization, and anti-**platelet** effects of heparin may persist when the aPTT is completely corrected. Excess protamine inhibits **platelet** function and compromises clot structure.

L77 ANSWER 25 OF 25 MEDLINE on STN
ACCESSION NUMBER: 94121035 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8291501
TITLE: Quantitative assessment of **platelet** function and clot structure in patients with severe coronary artery disease.
AUTHOR: Greilich P E; **Carr M E**; Zekert S L; Dent R M
CORPORATE SOURCE: Coagulation Special Studies Laboratory, Department of Anesthesiology, Walter Reed Army Medical Center,

Washington, DC.
SOURCE: The American journal of the medical sciences, (1994 Jan) Vol. 307, No. 1, pp. 15-20.
Journal code: 0370506. ISSN: 0002-9629.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199402
ENTRY DATE: Entered STN: 12 Mar 1994
Last Updated on STN: 12 Mar 1994
Entered Medline: 18 Feb 1994

AB The prothrombotic state of patients with coronary artery disease (CAD) can be attributed partially to **platelet** activity. Management of such patients is hindered by a lack of techniques to assess hemostatic function. This study used a sensitive technique to monitor **platelet** function by measuring **platelet** force development during clot retraction. This technique allowed simultaneous measurement of **clot elastic modulus** on the same sample. Fibrin mass-length ratio (mu), fibrinopeptide A, D-Dimer, von Willebrand's factor, thromboxane A2, **platelet** aggregation studies, and bleeding times also were performed. Fourteen patients with CAD were compared with 10 healthy volunteers. Despite more than 95% suppression of thromboxane B2 and prolongation bleeding times in patients taking aspirin, force development remained significantly elevated over healthy control patients (8,279 +/- 476 dynes versus 4,857 +/- 380 dynes, $p < 0.0006$). Patients not taking aspirin had normal bleeding times and force development of 19,110 +/- 3,700 dynes. **Clot elastic moduli** were enhanced in patients with CAD whether taking or not taking aspirin. Adenosine diphosphate and ristocetin-induced **platelet** aggregation were insensitive to the effect of aspirin in patients with CAD. Fibrinopeptide A, von Willebrand's factor, and D-Dimer levels were significantly elevated, and fibrin mass-length ratios were significantly larger in patients with CAD. Therefore, despite aspirin therapy, patients with severe CAD have evidence of persistent **platelet** activation and rigid clot structure. Monitoring of **platelet** force development may prove useful in delineating enhanced **platelet** function.

=> d his ful

(FILE 'HOME' ENTERED AT 10:20:15 ON 12 JUN 2006)

FILE 'CAPLUS' ENTERED AT 10:20:24 ON 12 JUN 2006

L1	20	SEA ABB=ON	PLU=ON	PLATELET/OBI (L) CONTRACTILE/OBI (L) FORCE#/OBI
L2	5	SEA ABB=ON	PLU=ON	BLOOD/OBI (L) CLOT/OBI (L) ELASTIC/OBI
L3	46	SEA ABB=ON	PLU=ON	(PLATELET (S) CONTRACTILE(S) FORCE#)/BI
L4	12	SEA ABB=ON	PLU=ON	(BLOOD (S) CLOT (S) ELASTIC)/BI
L5	51	SEA ABB=ON	PLU=ON	(L1 OR L2 OR L3 OR L4)
L6	97810	SEA ABB=ON	PLU=ON	HEART/OBI (L) (DISEASE#/OBI OR ANGINA/OBI OR INFARCT?/OBI)
L7	60714	SEA ABB=ON	PLU=ON	ARTERY/OBI (L) (DISEASE#/OBI) OR ATHEROSCLEROSIS?/OBI
L8	10	SEA ABB=ON	PLU=ON	L5 AND ((L6 OR L7))
L9	920	SEA ABB=ON	PLU=ON	(THROMBIN/OBI OR PLATELET/OBI) (L) MARKER#/OBI
L10	4	SEA ABB=ON	PLU=ON	L9 AND L5
L11	10	SEA ABB=ON	PLU=ON	L8 OR L10

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L12          175 SEA ABB=ON  PLU=ON  L9 AND ((L6 OR L7))
L13         4116 SEA ABB=ON  PLU=ON  (CONTRACTILE (S) FORCE)/BI
L14            4 SEA ABB=ON  PLU=ON  L13 AND L12
L15           10 SEA ABB=ON  PLU=ON  L14 OR L11
L*** DEL       0 S TROMBUS (L) MARKER#
L*** DEL       0 S L16 AND L5
L16           44 SEA ABB=ON  PLU=ON  THROMBUS/OBI (L) MARKER#/OBI
L17            1 SEA ABB=ON  PLU=ON  L16 AND L5
L18           10 SEA ABB=ON  PLU=ON  L17 OR L15
L19           26 SEA ABB=ON  PLU=ON  L16 AND ((L6 OR L7))
L20            7 SEA ABB=ON  PLU=ON  L19 AND PLATELET#/OBI
L21           16 SEA ABB=ON  PLU=ON  L20 OR L15
L22          594 SEA ABB=ON  PLU=ON  CARR M?/AU
L23            1 SEA ABB=ON  PLU=ON  KRISCHNASWAMI A?/AU
L24         2440 SEA ABB=ON  PLU=ON  MARTIN E?/AU
L25         3017 SEA ABB=ON  PLU=ON  (L22 OR L23 OR L24)
L26        86922 SEA ABB=ON  PLU=ON  PLATELET#/OBI
L27           47 SEA ABB=ON  PLU=ON  L26 AND L25
L*** DEL       1 S L17 AND (L6-7)
L*** DEL       0 S L28 NOT L21
L28            7 SEA ABB=ON  PLU=ON  L27 AND ((L6 OR L7))
L29            4 SEA ABB=ON  PLU=ON  L28 NOT L21

     FILE 'BIOSIS' ENTERED AT 10:27:28 ON 12 JUN 2006
L30           51 SEA ABB=ON  PLU=ON  PLATELET# (3A) CONTRACTILE (3A) FORCE#
L31           44 SEA ABB=ON  PLU=ON  CLOT (3A) ELASTIC
L32           74 SEA ABB=ON  PLU=ON  (L30 OR L31)
L33       282558 SEA ABB=ON  PLU=ON  HEART (L) (DISEASE# OR INFARCT?)
L34        58296 SEA ABB=ON  PLU=ON  ATHEROSCLEROSIS OR CORNARY (4A) DISEASE#
L35            9 SEA ABB=ON  PLU=ON  L32 AND ((L33 OR L34))
L36           12 SEA ABB=ON  PLU=ON  L32 AND (HEART OR ANGINA OR INFARCT?)
L37           12 SEA ABB=ON  PLU=ON  L36 OR L35
                 D COST
                 E CARR M/AU
L*** DEL     202 S E3 OR E9-10 OR E35-27
                 E MARTIN E/AU
L*** DEL    1484 S E3-37
L*** DEL     760 S MARTIN E/AU
L*** DEL     724 S MARTIN E ?/AU
L*** DEL       2 S MARTIN ERIKA/AU
L*** DEL    1686 S L38-41
L*** DEL       8 S L42 AND L32
L*** DEL       1 S L43 AND (L33 OR L34 OR ANGINA OR INFARCT?)
L*** DEL      41 S MARKER# AND L42
L*** DEL       1 S L45 AND PLATELET#
L*** DEL     760 S MARTIN E/AU
                 E CARR M/AU
L38          498 SEA ABB=ON  PLU=ON  ("CARR M"/AU OR "CARR M A"/AU OR "CARR M
                 AUSTIN"/AU OR "CARR M B"/AU OR "CARR M C"/AU OR "CARR M D"/AU
                 OR "CARR M E"/AU OR "CARR M E JR"/AU OR "CARR M F"/AU OR "CARR
                 M F JR"/AU OR "CARR M G"/AU OR "CARR M H"/AU OR "CARR M
                 HERZOG"/AU OR "CARR M I"/AU OR "CARR M J"/AU OR "CARR M J
                 T"/AU OR "CARR M JR"/AU OR "CARR M K V"/AU OR "CARR M L"/AU OR
                 "CARR M M"/AU OR "CARR M P"/AU OR "CARR M R"/AU OR "CARR M
                 T"/AU OR "CARR M W"/AU OR "CARR M Y"/AU) OR ("CARR MARCUS"/AU
                 OR "CARR MARCUS E"/AU OR "CARR MARCUS E JR"/AU)
L39          760 SEA ABB=ON  PLU=ON  MARTIN E/AU
L*** DEL      12 S MARIN E ?/AU
L40          724 SEA ABB=ON  PLU=ON  MARTIN E ?/AU
L41            2 SEA ABB=ON  PLU=ON  MARTIN ERIKA/AU
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L42          1980 SEA ABB=ON  PLU=ON  (L38 OR L39 OR L40 OR L41)
L43            34 SEA ABB=ON  PLU=ON  L42 AND L32
L44             5 SEA ABB=ON  PLU=ON  L43 AND (L33 OR L34 OR ANGINA OR INFARCT?)

L45            50 SEA ABB=ON  PLU=ON  MARKER# AND L42
L46             6 SEA ABB=ON  PLU=ON  L45 AND PLATELET
L*** DEL        1 S L46 AND L44
L*** DEL       10 S L46 OR L44
L*** DEL        0 S L47 NOT L37
L47            10 SEA ABB=ON  PLU=ON  L46 OR L44
L48             5 SEA ABB=ON  PLU=ON  L47 NOT L37

     FILE 'MEDLINE' ENTERED AT 10:36:56 ON 12 JUN 2006
L49            45 SEA ABB=ON  PLU=ON  PLATELET (S) CONTRACTILE(S) FORCE#
L50             7 SEA ABB=ON  PLU=ON  BLOOD (S) CLOT (S) ELASTIC
L51             3 SEA ABB=ON  PLU=ON  BLOOD (5A) CLOT(5A) ELASTIC
L52             8 SEA ABB=ON  PLU=ON  L49 AND HEART
L53        204937 SEA ABB=ON  PLU=ON  ANGINA OR INFARCT?
L54             1 SEA ABB=ON  PLU=ON  L49 AND L53
L55         46980 SEA ABB=ON  PLU=ON  ATHEROSCLEROSIS
L56             0 SEA ABB=ON  PLU=ON  L55 AND (L49 OR L51)
L57             0 SEA ABB=ON  PLU=ON  L51 AND (L53)
L58             8 SEA ABB=ON  PLU=ON  L54 OR L52
L59             2 SEA ABB=ON  PLU=ON  MARKER# (S) L49
L60             7 SEA ABB=ON  PLU=ON  MARKER# (L) L49
L61            22 SEA ABB=ON  PLU=ON  CLOT (3A) ELASTIC (3A) MODULUS
L62             0 SEA ABB=ON  PLU=ON  L61 AND (L53 OR L55)
L63        152066 SEA ABB=ON  PLU=ON  PLATELET#
L64            16 SEA ABB=ON  PLU=ON  L63 AND L61
L65        319251 SEA ABB=ON  PLU=ON  MARKER#
L66             3 SEA ABB=ON  PLU=ON  L64 AND L65
L67            14 SEA ABB=ON  PLU=ON  L66 OR L60 OR  L52 OR L54
                  E CARR M/AU
L68           182 SEA ABB=ON  PLU=ON  "CARR M"/AU OR ("CARR M E"/AU OR "CARR M E
                  J"/AU OR "CARR M E JR"/AU) OR ("CARR MARCUS"/AU OR "CARR
                  MARCUS E"/AU OR "CARR MARCUS E JR"/AU)
                  E KRISCHNASWAMI A/AU
                  E MARTIN E/AU
L69           1976 SEA ABB=ON  PLU=ON  ("MARTIN E"/AU OR "MARTIN E 3RD"/AU OR
                  "MARTIN E A"/AU OR "MARTIN E B"/AU OR "MARTIN E C"/AU OR
                  "MARTIN E D"/AU OR "MARTIN E D JR"/AU OR "MARTIN E E"/AU OR
                  "MARTIN E G"/AU OR "MARTIN E J"/AU OR "MARTIN E J 3RD"/AU OR
                  "MARTIN E JANE"/AU OR "MARTIN E JR"/AU OR "MARTIN E L"/AU OR
                  "MARTIN E M"/AU OR "MARTIN E N"/AU OR "MARTIN E O"/AU OR
                  "MARTIN E P"/AU OR "MARTIN E R"/AU OR "MARTIN E S"/AU OR
                  "MARTIN E S 3RD"/AU OR "MARTIN E T"/AU OR "MARTIN E T JR"/AU
                  OR "MARTIN E V"/AU OR "MARTIN E W"/AU OR "MARTIN E W JR"/AU)
                  E MARTIN ERIKA/AU
L70            11 SEA ABB=ON  PLU=ON  ("MARTIN ERIKA"/AU OR "MARTIN ERIKA G"/AU
                  OR "MARTIN ERIKA J"/AU)
L71          2151 SEA ABB=ON  PLU=ON  (L68 OR L69 OR L70)
L72            22 SEA ABB=ON  PLU=ON  L71 AND (L49 OR L51 OR L61)
L73            16 SEA ABB=ON  PLU=ON  L72 NOT L67
L*** DEL      198 S L16 AND (HEART OR ANGINA OR INFARCT?)
L74             0 SEA ABB=ON  PLU=ON  L72 AND (HEART OR ANGINA OR INFARCT?)
L*** DEL       22 S L72 AND PLATELET?
L75            16 SEA ABB=ON  PLU=ON  L73 AND PLATELET?
                  D TI 10-10
                  D TI 1-10
L*** DEL       16 S L75 NOT L67
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     FILE 'CAPLUS, BIOSIS, MEDLINE' ENTERED AT 10:44:39 ON 12 JUN 2006
L76          32 DUP REM L21 L37 L67 (10 DUPLICATES REMOVED)
                    ANSWERS '1-16' FROM FILE CAPLUS
                    ANSWERS '17-24' FROM FILE BIOSIS
                    ANSWERS '25-32' FROM FILE MEDLINE
L77          25 DUP REM L29 L48 L75 (0 DUPLICATES REMOVED)
                    ANSWERS '1-4' FROM FILE CAPLUS
                    ANSWERS '5-9' FROM FILE BIOSIS
                    ANSWERS '10-25' FROM FILE MEDLINE

     FILE 'CAPLUS, BIOSIS, MEDLINE' ENTERED AT 10:45:10 ON 12 JUN 2006
               D QUE L76
               D QUE L77
               D .CA L76 1-16
               D IBIB AB CT L76 17-32
               D IBIB AB L77 1-25


     FILE HOME

     FILE CAPLUS

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     FILE LAST UPDATED: 11 Jun 2006  (20060611/ED)

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     FROM JANUARY 1969 TO DATE.

     RECORDS LAST ADDED: 7 June 2006 (20060607/ED)


     FILE MEDLINE
      FILE LAST UPDATED: 10 JUN 2006 (20060610/UP).  FILE COVERS 1950 TO DATE.

      On December 11, 2005, the 2006 MeSH terms were loaded.

      The MEDLINE reload for 2006 is now (26 Feb.) available.  For details
      on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
      See also:

         http://www.nlm.nih.gov/mesh/
         http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
```

http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
CONNECT CHARGES	1.54	25.28
NETWORK CHARGES	0.18	2.88
SEARCH CHARGES	0.00	64.35
DISPLAY CHARGES	97.40	97.40
FULL ESTIMATED COST	99.12	189.91

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-15.00	-15.00

IN FILE 'CAPLUS, BIOSIS, MEDLINE' AT 10:46:31 ON 12 JUN 2006

=> log hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	99.12	189.91

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-15.00	-15.00

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 10:46:54 ON 12 JUN 2006